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Let's GET Wellington MOVING

Golden Mile: Single Stage Business Case Report)

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Futuregroup »



Boffa Miskell



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Executive Summary

The Golden Mile project is part of the Let's Get Wellington Moving (LGWM) Three-Year Programme.

This Single Stage Business Case (SSBC) assesses the case for investment and the preferred way forward for investing in the Golden Mile's transport and public realm. In summary, it presents the case for change, sets out the option development and assessment processes to identify a preferred option, presents the cost estimation and economic appraisal for this option as well as a summary of the option's expected impacts and outcomes.

The Golden Mile is the heart of our City

The Golden Mile plays a vital role in the success of Wellington's transport system, regional economy and sense of place. Transecting central Wellington, it provides the core spine for the city's bus network and enables thousands of people to access employment, do business, shop, dine and to access other central city destinations each day. It has the highest pedestrian volumes in New Zealand. Due to its critical functions, the Golden Mile must perform at a high level, both as a transport asset that safely and efficiently moves people and goods, and as an important place for people that is pleasant, safe and attractive.

Around 70,000 people travel on Lambton Quay and Willis Street each day. On each street up to 50 per cent of people are moving on foot and a similar amount are travelling on buses. Fewer than 10 per cent of the people move through Lambton Quay in cars. While fewer people move through Manners Street and Courtenay Place each day (about 40,000), these roads are also heavily used by people on buses (about 50 to 70 per cent) and people walking (about 30 per cent). People in cars represent around 20 per cent of people using Courtenay Place.

The relative volume of cyclists is comparatively low, with cyclists accounting for just over 1 per cent or 500 people per weekday. This number is reflective of the mix of uses, with cyclists sharing road space with large numbers of buses and private vehicles, as well as sections of the Golden Mile which are restricted to Bus Only.

The Golden Mile is steeped in built and cultural heritage. It is both a primary destination for people accessing work, shopping or entertainment in Wellington, as well as a principal access corridor for people moving through the city to destinations beyond the Wellington CBD. It provides the core spine for the city's bus network and enables thousands of people from across the region to gain access to employment, retail and entertainment. Given the high number of people travelling on buses and walking along the Golden Mile, any changes made to its transport network will affect the daily movement and access of many people.

Wellington City is growing

The Wellington region currently accommodates over 525,000 people, with Wellington City currently home to over 210,000 people. Over the next 30 years, the region is expected to grow by approximately 7 per cent or 70,000 people. The city's population is predicted to increase by approximately 14 per cent or 30,000 people over the same period, with a large proportion of this population growth to occur in the central city.

Employment is also set to grow. Projections show that the city's employment could grow between 15 and 20 per cent over the next 30 years. The employment predictions suggest that between 55 and 60 per cent of this growth is likely to occur in the central city.

As the Golden Mile is a key bus corridor and pedestrian route, greater numbers of people can be expected to move within this key corridor due to population and employment growth.

Identifying a vision

The first step in development of the SSBC was to establish a vision statement for 2036 as follows:

Golden Mile Vision

The Golden Mile gets Wellington moving by...

Connecting people across the central city with a reliable public transport system that is in balance with an attractive pedestrian environment.



WHAT THIS LOOKS LIKE:

RELIABLE NETWORK

Golden Mile is core to the public transport network, reliably connecting people to and through the central city.

REFLECTING PLACE

Golden Mile streets and spaces reflect changes in characteristics along the way from our capital places at one end to our fun places at the other.

COMFORTABLE + SAFE

Golden Mile streets are prioritised for public transport and active modes, as well as being greener, safer, comfortable spaces for people to spend time in

Defining the problems

Next, the SSBC identified three fundamental problems (and their weightings) that would need to be addressed by any investment in the Golden Mile. These problems are: ¹

- Slow and unpredictable bus travel times reduce the attractiveness of travel by bus (50 per cent)
- Inadequate provision for pedestrians along and across the Golden Mile reduces convenience of walking (30 per cent), and
- Street layout limits the attractiveness of the Golden Mile as a place in which to spend time and move through (20 per cent).

The supporting evidence for Problem Statement 1 identified that travel times were variable on the Golden Mile, and this was causing problems for customers not only on the Golden Mile, but also across the wider bus network. Many factors contribute to this variability including the high number of traffic signals, the high number of pedestrian crossings, the short frequency between bus stops, “side friction” caused by private motor vehicles (PMV), and bus-on-bus congestion (caused by bus volumes exceeding road capacity). All of these unplanned factors cause buses to frequently slow down.

¹ Cycling was not specifically identified as a primary problem to be addressed. This was due to the comparatively low number of cyclists that use the corridor and because the full extent of the Golden Mile was not identified in Wellington City Council’s Strategic Cycle Corridor (i.e. only Courtenay Place and Willis Street are identified). However, cyclists were considered to be a key user of the Golden Mile and it was recognised that their requirements needed to be considered during option development

For Problem Statement 2, the convenience, comfort and safety for people walking along the Golden Mile is variable. In many locations, there are more people wanting to walk than there is available capacity, sometimes street furniture and too many people waiting at bus stops hinders movement and there are long wait times at traffic signals.

Problem Statement 3 is supported by studies that advise that the Golden Mile lacks good quality public spaces for people to comfortably spend time in and to enjoy. Navigating around the Golden Mile can be hard for some people as well.

These problems are expected to get worse in the future, as Wellington’s population and employment increases over time.

Benefits and objectives from investing in change

Following the identification of the problems, the SSBC identified the following benefits (and their weightings) if the problems were to be addressed:

- A faster, more reliable bus system (50 per cent)
- Improved pedestrian safety (20 per cent)
- Improved pedestrian convenience (20 per cent), and
- Increased amenity value (10 per cent).

Consideration of the problems and benefits, as well as alignment to the LGWM Programme’s overarching Vision and Objectives, enabled the following investment objectives (and supporting weightings) to be identified:

- Improve bus travel times and travel time reliability along the Golden Mile (40 per cent)
- Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (15 per cent)
- Reduce the number of crashes within the Golden Mile that result in pedestrian injury (15 per cent)
- Increase the capacity for pedestrians to move through the corridor by improving walking level of service along and across Golden Mile (15 per cent), and
- Improve the place quality of the Golden Mile (15 per cent).

These investment objectives were further refined and made SMART during the development of the SSBC as follows:

SMART Investment Objectives (and weightings)	Key Performance Indicator(s)	Baseline(s)	Target	Time	Source
Improve bus travel times and travel time reliability along the Golden Mile (40%)	<p>KPI 1: Bus travel time reliability Variation between scheduled and actual arrival times</p> <p>KPI 2: Bus travel time Route 1 Golden Mile start to finish travel time, PM Peak</p>	<p>KPI 1: NB = 5 minutes SB = 4 minutes 06/2020</p> <p>KPI 2: NB = 14 minutes SB = 13 minutes</p>	<p>KP 1: NB and SB 60 – 62 seconds</p> <p>KPI 2: NB = 12 minutes SB = 11 minutes</p>	06/2023	Metlink
Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (15%)	<p>KPI 1: Customer satisfaction surveys Enhanced Annual GWRC customer surveys for the Golden Mile</p>	TBC	TBC	TBC	Metlink
Reduce the number of crashes within the Golden Mile that result in pedestrian injury (15%)	<p>KPI 1: No. of DSI's Number of pedestrians involved in DSI</p>	2.8 avg p.a. ped DSI 5 year average ending 12/2019	2.6 avg p.a. ped DSI	12/2036	CAS Analysis
Increase the capacity for pedestrians to move through the corridor by improving walking LOS along and across Golden Mile (15%)	<p>KPI 1: Pedestrian Delay at Key Intersections Pedestrian time lost due to intersection delay</p>	Varies	Varies	Varies	Transport Monitoring Surveys
Improve the place quality of the Golden Mile (15%).	<p>KPI 1: LGWM Amenity Index Amenity Index</p>	Varies: Poor to Average 06/2019	Average or better >3.5 (out of 5)	12/2036	LGWM PBC

Option development

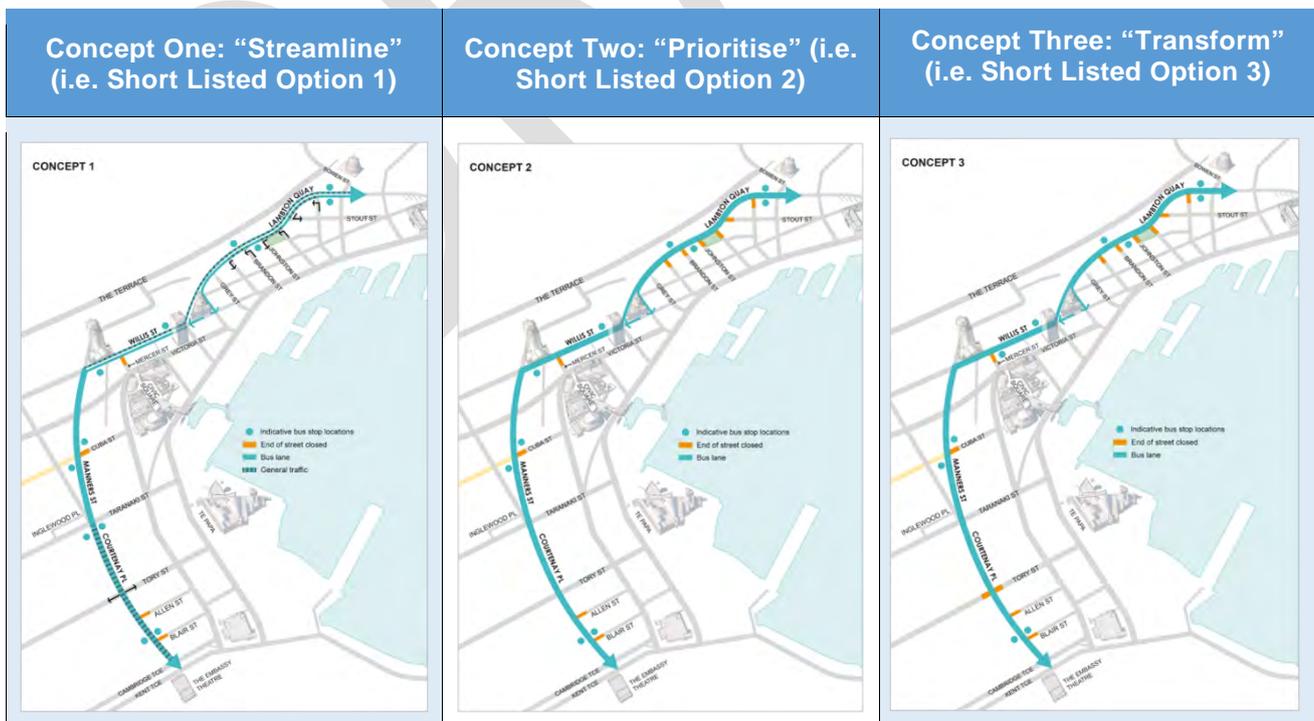
Given the interrelationship between the problems, benefits and investment objectives, and the complexities of addressing these issues in a dynamic urban environment, a broad range of interventions needed to be considered.

It was identified early in the process that whilst the consideration of each potential intervention in isolation might be useful, it was the relationship between the interventions as part of an overall package of improvements that was critical for ensuring optimal outcomes.

The option development process commenced by identifying a long list of potential “mitigation / intervention” scenarios for each section of the Golden Mile. These scenarios explored different combinations of treatments that could respond to the key public transport, pedestrian and public realm problems identified for the Golden Mile.

The long list of scenarios was initially assessed against the investment objectives and other key considerations. This process enabled a refined long list of 12 scenarios to be further considered. These scenarios were then subsequently subjected to detailed technical analysis based on bus stop spacing / location, PMV restrictions and corridor space allocation. This analysis enabled the identification of three *short listed* scenarios for further consideration as follows: Scenario 1CW7 (which was renamed Option 1); Scenario 2BX8 (which was renamed Option 2), and Scenario 3BX9 (which was renamed Option 3).

Before undertaking detailed assessment of each short-listed option, LGWM decided to undertake a comprehensive public engagement process to obtain feedback on what stakeholders and the wider public liked or didn't like about the options. For the purposes of the 2020 Golden Mile Public Engagement Programme, the short-listed options were renamed Concept One (“Streamline”), Concept Two (“Prioritise”) and Concept Three (“Transform”). Each concept was summarised in the public engagement material as follows:



Each of the above concepts shared the following common design features:

- Changes to PMV access to the Golden Mile to improve bus reliability and travel times
- Closure of “side road ends”, removal of on-street car parking (on the Golden Mile), consolidation of bus stops and re-location of loading bays / taxi stands to improve bus reliability and travel times and to convert the “left over” road / on-street parking space to increase pedestrian / public realm areas, and
- Emergency vehicle access would always be maintained.

The key design differences between the concepts included:

- Concept One would retain PMV access but there would be turning restrictions at key intersections on Lambton Quay and closure of four side road ends. Such interventions would enable existing road space to be converted into new pedestrian / public realm areas (there would be an overall increase of this type of space by about 30 per cent). This option’s focus would be on improving bus reliability and travel times by reducing vehicle conflicts and optimisation of use of space
- Concept Two would remove PMV access and introduce 10 side road end closures (i.e. the same side road end closures as proposed in Concept One, plus an additional six end closures²). Such interventions would enable the remaining road space to be converted into new pedestrian / public realm areas (there would be an overall increase of this type of space by about 30 per cent). A key distinctive feature of this concept was the creation of additional bus capacity through provision of two bus lanes in each direction on Lambton Quay and Courtenay Place. This additional capacity would be for improve bus reliability and travel times, and
- Concept Three would also remove PMV access and introduce 11 side road closure ends (i.e. the same side road end closures identified in Concepts One and Two plus the additional closure of the Tory Street / Courtenay Place intersection for north / south through movement). A key distinctive feature of this concept was the provision of one lane for buses in each direction along the entire Golden Mile (plus use of in-line bus stops). This intervention would enable the conversion of existing carriageway, particularly on Lambton Quay and Courtenay Place, to new pedestrian / public space areas. As a consequence, there would be an overall increase of pedestrian / public space by about 75 per cent. The key outcomes of this concept would be to improve bus reliability and travel times and to significantly increase pedestrian / public realm space in the Golden Mile. Concept Three would also provide opportunities for dedicated cycling facilities to be located on Courtenay Place and / or Lambton Quay if required.

Another key point of difference between the concepts were their construction cost estimates. That is, Concept Three was likely to cost significantly more than both Concepts One and Two.

Community feedback

Overall, about 2000 people and organisations commented on the proposed concepts. Most of the comments received expressed a preference for Concept Three for Lambton Quay, Willis Street and Courtenay Place (there was also support for the minor changes proposed for Manners Street). The majority also supported providing cycling facilities and retaining loading bays or taxis stands on the Golden Mile (or were supportive of allowing service

² It is noted that the Tory Street / Courtenay Place intersection would remain open for north / south through movement under Concept Two

vehicles to use the Golden Mile at certain times of the day). However, the retail and hospitality business sectors were concerned that the concepts, or certain aspects of the concepts (e.g. reducing on-street parking, removing PMV access and service vehicle access), would impact negatively on retail / business activity.

Identifying a preferred option to be taken forward

Following completion of the Golden Mile Public Engagement Programme in 2020, a multi criteria analysis (MCA) process was undertaken to evaluate / score the three short listed options. In summary this process involved subject matter experts undertaking qualitative evaluations (where possible) and scoring (on a 7-point scale) each short-listed option against a do-minimum scenario. A critical feature of this scenario was the assumption that a second north-south bus corridor would operate within the Wellington CBD, and would enable the maximum number of buses on the Golden Mile to be “capped” at 100 vehicles per hour per direction (i.e. any additional buses over this cap would be accommodated on an alternative north-south corridor).

The MCA assessor’s unweighted or raw scores (and noting that the cost, benefits / disbenefits and value for money assessment criterion were not assigned specific scores) are set out below:

Assessment area	Lambton Quay				Willis Street				Manners Street		Courtenay Place			
	Do-Minimum	Option 1	Option 2	Option 3	Do-Minimum	Option 1	Option 2	Option 3	Do-Minimum	All Options	Do-Minimum	Option 1	Option 2	Option 3
Delivery of Objectives														
Bus Travel Time and Reliability	0	1	2	1	0	1	2	2	0	1	0	1	2	2
Bus Passenger Boarding and Alighting Comfort and Convenience	0	1	3	2	0	1	1	2	0	1	0	2	3	2
Pedestrian Safety	0	1	0	2	0	1	1	1	0	1	0	1	0	2
Pedestrian Capacity	0	1	2	2	0	1	1	2	0	1	0	1	2	2
Improve Place quality	0	0	1	3	0	1	1	1	0	0	0	0	1	3
Effects														
Social	0	0	1	3	0	1	2	3	0	0	0	1	2	3
Retail Impacts	0	1	1	2	0	1	1	2	0	0	0	1	1	1
Cycling Level of Service	0	1	1	3	0	0	0	-1	0	-1	0	1	1	3
General (Road) Safety	0	1	1	2	0	1	1	1	0	1	0	1	1	2
Sustainability	0	1	1	3	0	1	1	3	0	0	0	1	1	3
Fit with LGWM Programme	0	0	3	3	0	-1	-1	-1	0	0	0	2	3	2
Delivery, maintenance, and operations														
Delivery	0	-1	-1	-2	0	-1	-1	-2	0	-1	0	-1	-1	-2
Operations and Maintenance	0	-1	-2	-3	0	-1	-2	-3	0	-1	0	-1	-2	-3
Timeframe for Delivery	0	2	2	2	0	2	2	2	0	2	0	2	2	2
Final scores and rankings														
Total scores	0	8	15	23	0	8	9	12	0	4	0	12	16	22
Final rankings		3 rd	2 nd	1 st		3 rd	2 nd	1 st		All Options		3 rd	2 nd	1 st

Cost, benefit, and value for money ranges			
Assessment criteria	Option 1	Option 2	Option 3
Cost estimates range (real)	\$15M - \$23M	\$21M - \$32M	\$52M - \$79M
Discounted Costs (present value)	\$14M - \$20M	\$19M - \$29M	\$47M - \$72M
Benefit ranges (present value)	\$31M - \$57M	\$42M - \$219M	\$87M - \$505M
Indicative BCR ranges (i.e. value for money)	1.6 - 4.2	1.5 - 12	1.2 - 11

Individual benefit components	Option 1 (\$M)	Option 2 (\$M)	Option 3 (\$M)
Car travel time impact	-\$6.2 - \$4.8	-\$79 - \$37	-\$79 - \$37
Public transport travel time benefit	\$18 - \$24	\$26 - \$34	\$23 - \$30
Public transport reliability benefit	\$4.7 - \$6.1	\$9.1 - \$12	\$9.1 - \$12
Pedestrian realm benefits	\$11 - \$17	\$81 - \$128	\$122 - \$407
Pedestrian travel time benefits	\$3.1 - \$4.9	\$5.8 - \$9.4	\$13 - \$20

As set out above, Option 3 was identified as the best performing option for Lambton Quay, Willis Street and Courtenay Place under the unweighted scoring process. The “All options” option was considered the best performing option for Manners Street.

In addition to identifying the unweighted scores, a weighting scenario exercise was undertaken to test the sensitivities of the unweighted scores to matters considered, under various weightings, to be more important. Option 3 was also generally preferred under most (but not all) weighting scenarios.

Overall, Option 3 was ultimately identified through the MCA process as the best performing option for Lambton Quay, Willis Street and Courtenay Place (and the “All options” option was considered the best performing option for Manners Street). Option 3 was subsequently endorsed by the LGWM Board, and publicly announced as the preferred investment option for the Golden Mile Project in June 2021.

In summary, the key features of the preferred option included:

- PMV access removed from the entirety of the Golden Mile
- One bus lane in each direction along the entire Golden Mile (with no physical separation between the lanes)
- Bus stops will be indented at either end of the Golden Mile, with mid-block stops in-line
- Ends of Blair, Allen, Cuba, Mercer, Ballance, Stout, Waring Taylor, Johnson, Brandon and Panama Streets closed (north / south through traffic at the Tory Street / Courtenay Place intersection allowed)
- Dedicated or shared space for cyclists and fast active modes (e.g. e-scooters) on Courtenay Place and Lambton Quay (north of Panama Street)
- Some loading zones and taxi stands relocated to side streets (loading zones for large service vehicles to be provided on the Golden Mile based on temporal arrangements)
- On-street car parking on the Golden Mile removed (existing parking arrangements on side roads connecting to the Golden Mile to be modified)
- Bus stops consolidated to improve bus reliability [a maximum five-minute walk to a bus stop (for someone walking at an average speed)], and
- Emergency vehicle access to be allowed 24 / 7.

To enable a more detailed understanding of the specific access and movement arrangements for the users of the Golden Mile, a Movement and Access Strategy was developed to define:

- The user groups of the Golden Mile
- A movement and access hierarchy (for the user groups)
- The strategic access principles and access controls for each user group, and
- The movement and access plans for each user group, for each section of the Golden Mile.

It is expected that this strategy will be further refined during the Golden Mile’s pre-implementation phase, which will include further engagement with the public and key stakeholders.

Benefit cost ratio(s)

The benefit cost ratio (BCR) for the preferred option, which has been calculated over a 40-year evaluation period (using a 4 per cent discount rate), is 4.6 (generating total benefits worth \$399M net present value). A breakdown summary of the benefits is as follows:

Cost / Benefit	Present Value (\$M)
Costs	
Construction costs	\$80
Maintenance costs	\$6
Total costs	\$86
Benefits	
Car travel time impact	-\$20
Emission reduction benefit	\$17
Health benefit from mode shift (car to public transport)	\$48
Public transport travel time impact	\$17
Public transport reliability impact	\$27
Pedestrian travel time impact	\$25
Pedestrian crash reduction benefit	\$37
Pedestrian realm benefit ³	\$247
Total benefits	\$399
Net benefits	\$313
Benefit-cost ratio (base)	4.6
First year rate of return	0.11

It is noted that significant benefits are expected to be generated by the combined pedestrian travel time, crash reduction and pedestrian realm benefits. Analysis shows that most of these benefits will occur on Lambton Quay, Willis Street and Courtenay Place.

A range of BCR sensitivity tests were undertaken to examine the base BCR under different scenarios. The scenarios included a shorter benefit evaluation period (i.e. 13 years), higher and lower discount rates, a construction delay of two years and reduced pedestrian realm benefits. For the various sensitivity tests examined, the preferred option's total benefits (i.e. net present value) ranged from \$156M to \$475M, and the BCRs ranged from 1.9 to 5.4.

³ In summary, this benefit covers benefits to be generated by providing improved seating, increasing the number of trees / plantings, reduction in adjacent traffic volumes and widen footpaths in crowded conditions

Implementation costs

The remaining costs for the Golden Mile Project were updated to reflect more detailed design information and an improved understanding of risks. The base⁴, expected and the 95th percentile estimate cost ranges are as follows:

	Base	Expected	95 th percentile
Preferred option	\$64.9M	\$84.9M	\$101.1M

Overall, the cost estimate range for the Golden Mile Project is \$64.9M to \$101.1M. The costs for the implementation phase are expected to be further refined during the pre-implementation phase.

Overall outcomes of the preferred option

The preferred option's alignment with the LGWM's programme objectives, the Golden Mile investment objectives and the goals of key national transport strategies and policies is as follows:

Strategies and Policies	Alignment Summary
LGWM programme objectives	STRONG
Golden Mile investment objectives (see below for further discussion)	STRONG
Government Policy Statement on Land Transport 2021	STRONG
Arakai – Waka Kotahi's 10 year plan	STRONG
Waka Kotahi New Zealand Transport Agency Road to Zero 2020 – 2030	MODERATE
Wellington Regional Land Transport Plan 2021	STRONG
Wellington Regional Public Transport Plan	STRONG
Greater Wellington Regional Council Long Term Plan 2018 – 28	MODERATE
Wellington Regional Growth Framework	MODERATE
Wellington Urban Growth Plan 2014 – 2043	STRONG
Our City Tomorrow: Spatial Plan for Wellington City	STRONG
Wellington Towards 2040: Smart Capital	STRONG
Te Atakura First to Zero: Wellington City's Zero Carbon Implementation Plan 2020 – 2030	STRONG

⁴ WCC maintenance costs are excluded from the base estimate

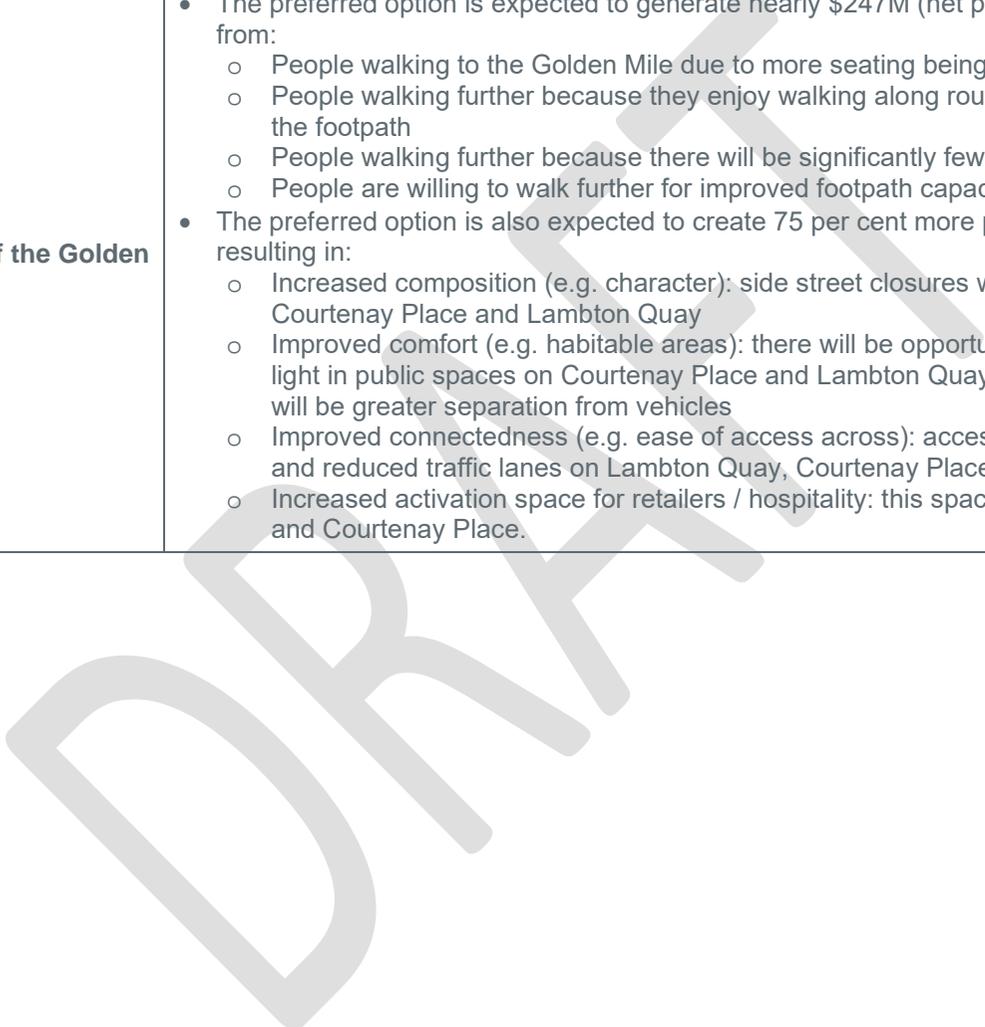
Strategies and Policies	Alignment Summary
Wellington City Council (WCC) Long Term Plan 2021-31	STRONG
WCC Walking Policy 2008	STRONG
WCC Parking Policy 2020	STRONG
Pōneke Promise	TBC
WCC Fossil Fuel Free Central City by 2025	TBC

The assessment of the preferred option against the Golden Mile’s investment objectives provides further insights into the outcomes that can be expected from the preferred option’s implementation:

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Objectives (and weightings)	Anticipated Outcomes
<p>Improve bus travel times and travel time reliability along the Golden Mile (40%)</p>	<ul style="list-style-type: none"> Improved bus travel times: the preferred option is predicted to generate about \$18M (net present value) in bus travel time benefits (e.g. between 1 to 2 minutes of bus travel time savings in the northbound direction for each person travelling on the bus), and Improved travel reliability: the preferred option is predicted to generate about \$27M (net present value) in bus travel reliability benefits because of reduced bus dwelling time (through optimisation of signal timings and bus stop consolidation), removal of PMVs (and associated side friction problems) as well as a reduction in bus queuing (e.g. it is predicted that there could be a one minute reduction in delay time on Courtenay Place and Manners Street).
<p>Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (15%)</p>	<ul style="list-style-type: none"> The preferred option is expected to result in an increase of between 25 to 50 per cent in bus stop areas, providing more space for customers. Streets to have the greatest increase will be Willis Street and Courtenay Place followed by Lambton Quay.
<p>Reduce the number of crashes within the Golden Mile that result in pedestrian injury (15%)</p>	<ul style="list-style-type: none"> The preferred option is predicted to generate \$37M (net present value) in pedestrian crash reduction benefits, and The preferred option will lead to a 70 per cent reduction of pedestrian crashes for the 10 years following its implementation (that is, there were 295 crashes on the Golden Mile for the 2011 to 2020 period, however this is predicted to reduce to 88 by 2030). Key reasons for crash reduction include removal of PMV conflicts, including a significant reduction in crashes from reduced red light running.
<p>Increase the capacity for pedestrians to move through the corridor by improving walking LoS along and across Golden Mile (15%)</p>	<ul style="list-style-type: none"> The preferred option is predicted to generate \$25M (net present value) in pedestrian travel time benefits It is forecasted that improved pedestrian travel times will be due to closure of side road ends and optimised traffic signal timings. For example, pedestrian travel times are expected to reduce by a collective 240 hours per day due to closure of the ends of Stout Street, Brandon and Mercer Streets It is estimated that there could be between 10 to 25 per cent improvement in pedestrian level of service from increased pedestrian density (with the greatest service improvement occurring on Willis Street and Lambton Quay). Increased pedestrian density will help to reduce the number of people stepping out onto the road carriageway, and The preferred option is expected to increase bus stop density on the Golden Mile by between 25 to 50 per cent, which will help to improve pedestrian through movements at bus stops.

Objectives (and weightings)	Anticipated Outcomes
<p>Improve the place quality of the Golden Mile (15%)</p>	<ul style="list-style-type: none"> • The preferred option is expected to generate nearly \$247M (net present value) in pedestrian realm benefits from: <ul style="list-style-type: none"> ○ People walking to the Golden Mile due to more seating being available ○ People walking further because they enjoy walking along routes with trees / plantings on or adjacent to the footpath ○ People walking further because there will be significantly fewer PMVs to avoid on the route, and ○ People are willing to walk further for improved footpath capacity. • The preferred option is also expected to create 75 per cent more public realm space on the Golden Mile, resulting in: <ul style="list-style-type: none"> ○ Increased composition (e.g. character): side street closures will encourage people to spend more time on Courtenay Place and Lambton Quay ○ Improved comfort (e.g. habitable areas): there will be opportunities to make greater use of available sun light in public spaces on Courtenay Place and Lambton Quay. Safety perceptions will improve as there will be greater separation from vehicles ○ Improved connectedness (e.g. ease of access across): access will improve through removal of PMVs and reduced traffic lanes on Lambton Quay, Courtenay Place and Willis Street, and ○ Increased activation space for retailers / hospitality: this space can be utilised for trade on Lambton Quay and Courtenay Place.



The preferred option will also assist with reducing carbon monoxide, carbon dioxide, nitrous oxide and PM10 emissions. That is, by improving public transport and active mode infrastructure (including removing PMV access and on-street parking from the Golden Mile) is expected to help make the bus / active mode network more attractive and encourage people to switch from their private motor vehicles to more sustainable modes of travel. It is noted that the preferred option is expected to generate about \$17M (net present value) in emission reduction benefits, and remove 5.3 tonnes of carbon monoxide, 2.8 tonnes of carbon dioxide, 0.5 tonnes of nitrous oxide and 3.8 tonnes of PM10 emissions by 2038.

The preferred option is also expected to generate significant health benefits as a result of mode shift from cars to public transport. In total, the preferred option is expected to generate \$48M (net present value) in health benefits.

Further technical analysis of the preferred option

A range of investigations have been undertaken to assess the likely impacts of the preferred option, and to inform its development during the pre-implementation phase. Of note was the transport effects and retail impacts assessment.

Transport modelling of “worst case” and optimistic scenarios was undertaken to understand the potential traffic effects of the preferred option (with the most plausible scenario being somewhere between the two). The modelling work concluded that even for the worst-case scenario, the network could accommodate the changes proposed by the preferred option. There were a few locations and intersections identified however where small adverse impacts for traffic could be expected. These are:

- Featherston Street southbound
- Ghuznee Street eastbound and its intersections with Willis, Victoria and Taranaki Streets, and
- The intersection between Taranaki Street and Wakefield Street.

Throughout development of the SSBC, the Golden Mile retail and hospitality sectors voiced concerns over the impacts of removing PMVs and on-street car parking from the Golden Mile. The work undertaken by business experts identified that the preferred option’s infrastructure changes would have net benefits for retailers as the positive impacts (from increases in footfall from widened footpaths and dedicated active mode space would lead to increased sales and revenue) were likely to outweigh the negative impacts (the removal of general traffic, parking and closure of side streets).

Financial case

Funding for the Golden Mile Project is to be guided by the agreed LGWM programme funding arrangements. Final funding allocations between the funding partners for the next phases of the Golden Mile Project have yet to be finalised, however it is expected that central government’s share will be sourced from the National Land Transport Fund, and Wellington City and Greater Wellington Regional Council’s will be debt funded.

Commercial case

The commercial case sets out the procurement, consenting and traffic controls strategies.

A key focus of the procurement approach is to ensure the pre-implementation phase progresses with speed, so the LGWM programme timeline can be met. To this end, LGWM are considering varying contractual arrangements with FutureGroup for the commencement of the pre-implementation phase (subject to acceptable pricing and key personnel). An initial assessment of delivery models indicates the preferred option’s

implementation phase is likely to be delivered via a variant of the Early Contractor Involvement model. Suppliers will be selected based on quality and price through the price quality method.

The consenting strategy identifies that the preferred option is located within legal road (and no private property is required), and therefore the works are likely to be authorised under the provisions of the Local Government Act 1974 (so designation is not needed). However, other statutory approvals may be required and should be secured during the pre-implementation phase, including:

- Progressing the detailed designs to a point where there is sufficient design to inform an assessment of the preferred option’s compliance with the Wellington City Council District Plan’s Central Area Zone, Open Space A Zone and Heritage Zone provisions. At this point, the Golden Mile Project will need to decide whether resource consents or a certificate of compliance for the works should be sought
- Undertaking a cultural and heritage values / impacts assessment as soon as practicable to inform a general authority application to the New Zealand Historic Pouhere Taonga (and to allow sufficient time within the overall pre-implementation phase to secure its authorisation)
- Consider whether Hazardous Activities and Industries List (HAIL) detailed investigations are required as soon as practicable, and then determine whether resource consents are required, and
- Progressing detailed designs to a point where there is sufficient design information to assess whether the proposed physical works will be in compliance with WCC’s standard tree protection condition.

The traffic control strategy considered the following methods for regulating access in and along the Golden Mile:

- Road traffic controls (e.g. signs, signals and road markings)
- Physical access controls (e.g. gates, barriers and bollards), and
- Permitting system: this would allow permit holders who meet WCC requirements in relation to road use, vehicle class, type or travel time period to access the corridor (e.g. buses, emergency vehicles, service vehicles, taxis and ride share vehicles which travel during certain time periods).

The strategy concludes that a hybrid approach involving a combination of road traffic controls and a permitting system was likely to be the most effective solution for supporting the implementation of the preferred option. It also recommends that traffic resolution reports are specifically prepared and progressed for each section of the Golden Mile to reduce processing risks.

Management case

The management case identifies the following key project milestones for the delivery of the remaining project phases:

Key Milestones	Estimated Timing
SSBC approved	November 2021
Pre-implementation	December 2021
Implementation procurement	Mid to late 2022
Implementation commences	Late 2022 / early 2023
Implementation completed	2025

The management case also outlines the proposed communication and engagement processes for the pre-implementation phase, including commencing engagement towards the end of 2021.

Key risks

The management case identifies the key risks for the pre-implementation phase, including:

- Integration processes with WCC’s Streets for People, LGWM’s City Streets and LGWM’s Mass Rapid Transit projects
- The need for improved information on underground services
- Increasing (general) construction and material costs since Covid-19
- The need to efficiently integrate / coordinate activities with utility providers, and
- Consultation / stakeholder risks, including responding to the concerns raised by the retail and hospitality sectors over construction disruption effects, and the potential requests for additional scope to be added to the preferred option by some stakeholders.

Proposed investment prioritisation method ranking

Waka Kotahi uses the Investment Prioritisation Method (IPM) to prioritise transport investments under the National Land Transport Programme (NLTP) 2021 to 2024. Although the final IPM profile ranking for the Golden Mile Project will ultimately be determined at a LGWM programme level, a preliminary IPM profile has been developed for the preferred option to help inform future rating / ranking decision-making processes as follows:

Factor	Proposed Golden Mile Rating
GPS alignment	Very High
Scheduling	High
Efficiency	Medium

Next steps

Once this SSBC is approved, the next priority steps for LGWM are as follows:

- LGWM to confirm procurement of the professional service supplier for the pre-implementation phase
- Commence the Develop Design Phase (i.e. the first phase of the pre-implementation phase), including undertaking the following priority actions:
 - Golden Mile Design Team to mobilise, undertake gap analysis and commence detail design planning
 - LGWM Partners to finalise accessibility, urban design, landscape and placemaking approaches
 - LGWM to commence underground service location investigations to increase the understanding of service depths / locations (e.g. ground penetrating radar investigations)
 - Commence archaeology and HAIL investigations
 - Implement the activities identified in the (pre-implementation) communications and engagement plan, including posting the SSBC general arrangement plans on a social pin point platform, and preparing for engagement on the Develop Design Plans for late 2021
 - Undertake bus service disruption engagement / planning with Metlink
 - Establish engagement processes with mana whenua and the Pōneke Promise, and
 - Undertake early engagement with WCC traffic control officers on the requirements for the proposed traffic resolution reports.
- Commence procurement processes to identify potential ECI contractors in late 2021, with the objective of having them in place to inform the Initial Design Phase from March 2022.

The case for investing in the Golden Mile – in a nutshell

The Golden Mile project is one of LGWM's first key moves towards realising its overarching goal of moving more people with fewer vehicles, taking action on climate change and making the central city more liveable and accessible to all.

The project seeks to address the infrastructure problems that slow buses down and make travel by bus unreliable along the Golden Mile, which will have benefits for bus journeys across the wider network. The project also seeks to address the infrastructure problems that make walking, biking and spending time on the Golden Mile less attractive than it could be for many people.

LGWM considered a range of infrastructure intervention options that could address the problems and deliver on the bus improvement, pedestrian and public realm objectives. This process included taking on board feedback provided by the community on the options. At the end of this process Option 3 was identified as the *preferred option*.

Key features of the preferred option include improving bus and active mode infrastructure and creation of more space for people to spend time, to shop and to be entertained. Other key features include removal of private motor vehicles to allow more space and signal time to be prioritised for buses and people, and to encourage more people to switch to public transport and other sustainable modes of travel.

The project is expected to cost between \$64.9M and \$101M and has a favourable benefit cost ratio of 4.6.

Approval of this SSBC will allow the pre-implementation phase to commence, which is programmed to start in late 2021. This will include examining the construction risks in more detail.

This important project sits at the heart of the LGWM programme, and will be key to facilitating early behaviour change and providing early mode shift and placemaking benefits, including for journeys on the wider bus network as a result of improvements to this core central spine through the Wellington City CBD.

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QUALITY STATEMENT

PROJECT MANAGER
 Graeme Stanton

PROJECT TECHNICAL LEAD
 FutureGroup

PREPARED BY
 Rowan Schwynn

/ /2021

CHECKED BY
 Selwyn Blackmore / LGWM

REVIEWED BY
 Selwyn Blackmore

/ /2021

APPROVED FOR ISSUE BY
 Graeme Stanton

/ /2021

WELLINGTON

Level 15, 10 Brandon Street, Wellington Central, Wellington 6011
 PO Box 13-052, Armagh, Christchurch 8141
 TEL +64 4 381 6700

REVISION SCHEDULE

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2	13 September 2021	Version 2	FutureGroup	LGWM	Selwyn Blackmore	LGWM
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APPENDICES

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1 Purpose

This Single Stage Business Case (SSBC) presents the justification for investing in Let's Get Wellington Moving's (LGWM) Golden Mile Project. This report:

- Confirms the strategic case for investment
- Sets out the economic case, which demonstrates:
 - The option development and assessment processes used to assess potential investment options
 - A recommendation for a preferred investment option
 - A cost estimation and economic appraisal to demonstrate the value for money and return on investment of the preferred option, and
 - The management of the Preferred Option's potential impacts.
- Details how the Preferred Option will address the identified problems and how the agreed transport outcomes will be achieved through investment
- Outlines the commercial case, particularly the proposal for procurement
- Sets out the financial and management arrangements for the successful delivery of the Preferred Option, and
- Informs decision-makers on the benefits, costs and risks of the Preferred Option.

2 Background

The Golden Mile Project forms part of the LGWM programme. This programme is a joint initiative between Wellington City Council (WCC), Greater Wellington Regional Council (GWRC) and Waka Kotahi NZ Transport Agency (Waka Kotahi), with support from mana whenua partners Taranaki Whānui and Ngāti Toa.

The geographical scope for the LGWM programme covers the area from the Ngauranga Gorge to the Wellington International Airport, encompassing the Wellington Urban Motorway and connections to the central city, Wellington Hospital and the eastern and southern suburbs.

2.1 The Golden Mile

As set out in Figure 1 below, the Golden Mile is a collection of streets comprising of Lambton Quay, Willis Street, Manners Street and Courtenay Place. Collectively, these streets make up the “Golden Mile” (which is approximately 2.3km long) with each street having its own distinctive characteristics and functions. Notably, the Golden Mile is Wellington City’s prime employment, shopping and entertainment destination. It is also steeped in built and cultural heritage.

The key characteristics / functions of each street are set out below:

- **Lambton Quay** is the centre of employment and retail activity in Wellington City. It is surrounded by high rise office buildings with the highest employment concentration in New Zealand, as well as a large number of retail shopfronts and eateries. The street space along Lambton Quay is heavily used, with over 63,000 people using each block every day. Of these people⁵:
 - 46 per cent are pedestrians (or about 29,000 people per day)
 - 44 per cent move by bus (or about 28,000 people per day), and
 - 9 per cent are in private motor vehicles (PMV) (or about 6,100 people per day) (the remaining people are using other modes, such as bikes)
- **Willis Street** is a busy hub of employment and retail activity. It is also surrounded by high rise office buildings, as well as retail shopfronts and eateries. The street space along Willis Street is the busiest section of the Golden Mile, with just under 70,000 people in each block every day. Of these people⁶:
 - 45 per cent are pedestrians (or about 31,500 people per day)
 - 44 per cent move by bus (or about 30,200 people per day), and

Figure 1: The Golden Mile



⁵ Golden Mile Improvements, Problem Definition and Case for Change (June 2019), page 9

⁶ Ibid, page 10

- 10 per cent are in PMVs (or about 6,600 people per day).
(the remaining people are using other modes, such as bikes)
- **Manners Street** represents a transition point between Wellington Central, which is dominated by high density, high rise office buildings and supporting activities, and Te Aro, which is characterised by a mix of residential, entertainment and office activities, mostly accommodated in low to medium rise buildings. Manners Street is used by around 40,000 people every day and has the highest volumes of pedestrians and bus passengers of any part of the Golden Mile. Of these people⁷:
 - 66 per cent move by bus (or about 26,000 people per day)
 - 32 per cent are pedestrians (or about 13,000 people per day), and
 - 2 per cent are in PMVs (or about 1,000 people per day).
- **Courtenay Place** is Wellington’s centre of entertainment activity, and has a variety of restaurants, bars, cinemas, and theatres. It is also surrounded by offices and apartments. The street space along Courtenay Place is used by over 40,000 people every day. Of these people⁸:
 - 48 per cent move by bus (or about 20,400 people per day)
 - 31 per cent are pedestrians (or about 13,000 people per day), and
 - 20 per cent are in cars (or about 8,600 people per day).
(the remaining people are using other modes, such as bikes).

2.2 Population and Employment Context

The Wellington region is home to almost 500,000 people. The Wellington City’s CBD serves as the region’s commercial centre. To this end, more than 30 per cent of the people who work in Wellington City live elsewhere, with more than 75,000 people travelling into the city daily for work, education, shopping and dining.

Over 210,000 people (40 per cent) live in Wellington City. The City’s population is projected to grow by 50,000 to 80,000 people over the next 30 years⁹. The distribution of this growth is predicted to be as follows:

- Up to 18,000 more people will live in the city centre¹⁰
- Up to 14,000 more people will live in the inner suburbs¹¹, and
- Up to 42,500 more people will live in Wellington City’s outer suburbs¹².

Population forecasts have been reviewed¹³ post-Covid 19 by LGWM, and are summarised in Table 1 below.

⁷ Ibid, page 13

⁸ Ibid, page 15

⁹ Our City Tomorrow Spatial Plan for Wellington City

¹⁰ Ibid, Volume 3, Our Plan – Central City

¹¹ Inner suburbs include Thorndon, Aro Valley/Holloway Road, The Terrace, Kelburn, Mount Victoria, Oriental Bay, Mount Cook, Newtown, and Berhampore

¹² Outer suburbs include Tawa, Churton Park, Johnsonville, Newlands, Khandallah, Ngaio, Crofton Downs, Karori, Brooklyn, Island Bay, Hataitai, Kilbirnie, Lyall Bay, and Miramar

¹³ These forecasts exclude the potential impacts of the WCC Spatial Plan ‘Planning for Growth’ adopted on the 24 June 2021 which enables further densification of the Wellington City area

Table 1: Wellington City and Wellington Region Population Forecasts

	2013 Base	2018 Estimate	2036 Old (PBC)		2036 New (IBC)		2036 P4G ¹⁴		2036 RGF	
			Abs	% Diff	Abs	% Diff	Abs	% Diff	Abs	% Diff
CBD	19,400	22,100	32,500	47%	29,600	34%	26,500	20%	27,000	22%
Inner Suburbs	24,400	26,900	31,000	15%	32,200	20%	32,000	19%	31,100	16%
Eastern	36,800	38,000	40,100	6%	40,300	6%	39,800	5%	36,600	-4%
Southern	30,300	31,200	33,800	8%	34,000	9%	34,300	10%	31,900	2%
Western	25,300	25,700	26,600	4%	26,600	4%	29,500	15%	27,800	8%
Northern	64,100	67,600	77,600	15%	78,100	16%	78,600	16%	76,300	13%
Wellington City	200,300	211,500	241,600	14%	240,800	14%	240,700	14%	230,700	9%
Lower Hutt	101,100	107,600	107,300	0%	116,600	8%	116,600	8%	119,600	11%
Upper Hutt	41,400	45,300	47,400	5%	47,300	4%	47,300	4%	63,100	39%
Porirua	53,700	58,700	62,600	7%	79,400	35%	79,400	35%	64,400	10%
Kapiti	50,700	55,400	59,600	8%	62,600	13%	62,600	13%	70,000	26%
Wairarapa	42,400	46,700	44,200	-5%	50,900	9%	50,900	9%	49,800	7%
Region	489,600	525,200	562,700	7%	597,600	14%	597,500	14%	597,600	14%

As set out in Table 1, population projections indicate strong growth for the Wellington region following Covid-19, with Wellington City's population expected to increase by approximately 14 per cent (or about 30,000) by 2036. The CBD's population is also expected to increase by 34 per cent (or about 8,000) by 2036.

*Our City Tomorrow – Spatial Plan for Wellington City*¹⁵ (the WCC Spatial Plan) identifies that the city centre / Te Aro area is expected to see population increase from 17,000 today to 35,000 by 2047 (an increase of 18,000). In order to accommodate this growth, there will need to be between 7,900 and 8,800 new residential units created.

Pre-Covid-19 employment projections showed regional employment growing by 15 to 20 per cent over the next 30 years. The supporting analysis for these projections suggested that up to 60 per cent of this growth would occur in the central city, which would potentially increase the total number of jobs (in this locality) from 99,000 to between 114,000 and 131,000 over the next 30 years.

Employment growth projections post Covid-19 have also been refreshed by LGWM and are summarised in Table 2 below.

¹⁴ Provisional and subject to further detailed guidance from WCC regarding phasing of development within Wellington Inner suburbs

¹⁵ See: [Spatial Plan \(wellington.govt.nz\)](https://www.wellington.govt.nz)

Table 2: Wellington City and Wellington Region Employment Growth Projections

	2013 Base	2018 Estimate	2036 Old (PBC)		2036 New (IBC)		2036 P4G		2036 RGF	
			Abs	% Diff						
CBD	90,400	96,400	107,500	12%	112,400	17%	112,400	17%	100,100	4%
Inner Suburbs	11,300	12,000	13,100	9%	14,300	19%	14,300	19%	13,600	13%
Eastern	10,600	11,300	12,400	10%	12,800	13%	12,800	13%	11,600	3%
Southern	4,600	4,700	4,800	2%	4,900	4%	4,900	4%	5,000	6%
Western	4,100	4,300	4,800	12%	4,900	14%	4,900	14%	5,000	16%
Northern	16,200	16,900	18,000	7%	19,200	14%	19,200	14%	17,900	6%
Wellington City	137,200	145,600	160,600	10%	168,500	16%	168,500	16%	153,200	5%
Lower Hutt	40,500	43,300	43,300	0%	46,100	6%	46,100	6%	48,400	12%
Upper Hutt	11,300	12,400	12,000	-3%	12,600	2%	12,600	2%	19,900	60%
Porirua	15,100	16,500	17,100	4%	20,000	21%	20,000	21%	23,900	45%
Kapiti	14,000	15,300	15,500	1%	16,500	8%	16,500	8%	19,800	29%
Wairarapa	17,500	19,100	19,400	2%	21,000	10%	21,000	10%	19,600	3%
Region	235,600	252,200	267,900	6%	284,700	13%	284,700	13%	284,800	13%

As set out in Table 2 above, employment growth is expected to continue to increase in the Wellington region and in Wellington City following Covid-19 (the latter increases by 16 per cent by 2036). Employment in the Wellington CBD is also expected to increase by 17 per cent by 2036 (or by about 5,000).

The WCC Spatial Plan identifies that demand for commercial floor space will continue to grow across Wellington City over the next 30 years. In particular, the WCC Spatial Plan is projecting an increase of 625,750m² of commercial floor space over this time, with most of this growth occurring in the city centre.

In summary:

- Most of Wellington’s residential growth is occurring within, around, or north of, the city centre
- The majority of employment growth will occur within the Wellington CBD or surrounding inner suburbs, and
- Increased population growth and population density around key transport corridors is expected to result in increased demand for travel between the central city and the north.

The Golden Mile’s role as a key bus corridor and pedestrian route means that, in future, greater numbers of people will be moving within the corridor because of population and employment growth.

2.3 Future Travel Demand Context

Figure 2¹⁶ below, shows that demand for travel to and from the city centre by public transport is expected to grow by between 35 and 50 per cent. The higher increase is for a scenario where recent trends in the uptake of public transport and active modes continues. The corresponding increases in demand for driving into the city centre are forecast to be between 10 to 12 per cent.

¹⁶ Reproduced from Let’s Get Wellington Moving Recommended Programme of Investment and Indicative Package Modelling Report – Draft 7th June 2019

Figure 3 below shows the increased levels of public transport patronage that are possible from each part of the city (with and without intervention). This figure reflects the availability of different forms of transport (i.e. eastern, southern and western suburbs are not served by rail). It is also focused on the primary form of transport and makes no account for rail and bus interchange.

Figure 2: Modelled Change in Public Transport and Car Metrics: 2013 base, 2036 Do-Minimum Trend, 2036 Do-Minimum Balanced

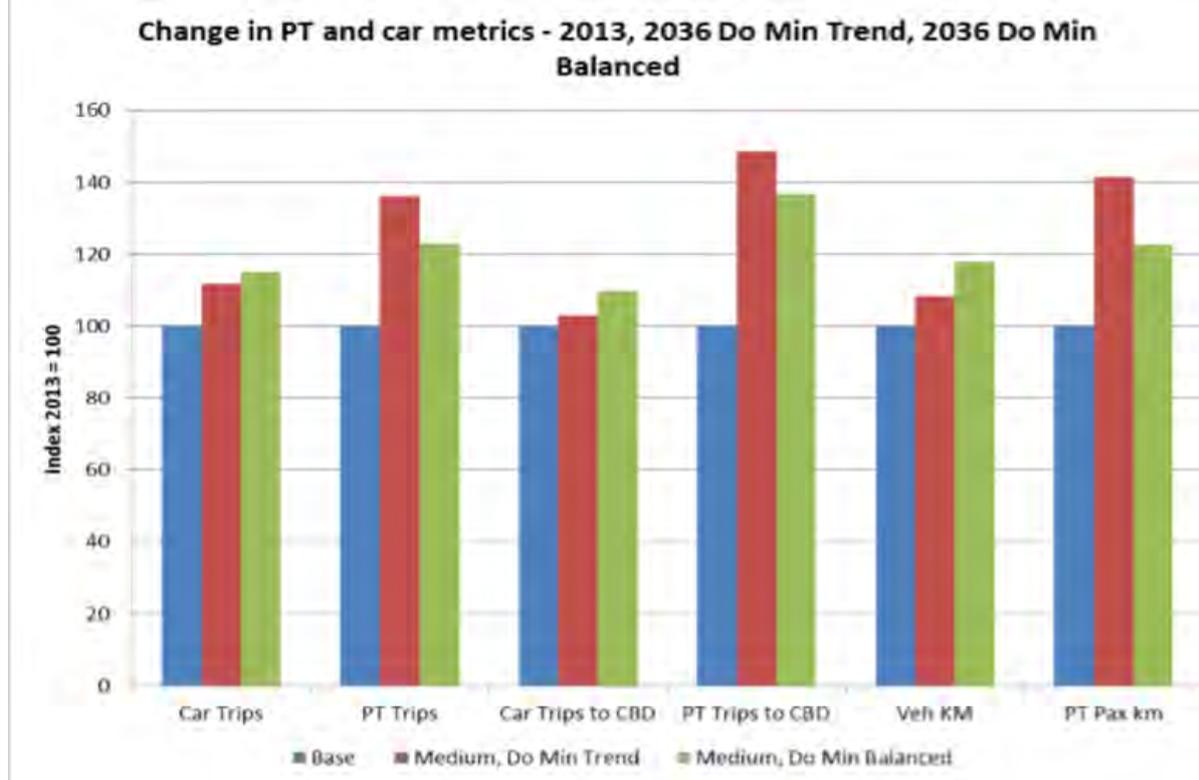


Figure 3: Modelled Public Transport Passengers Entering Wellington Central City (Trend Scenario)

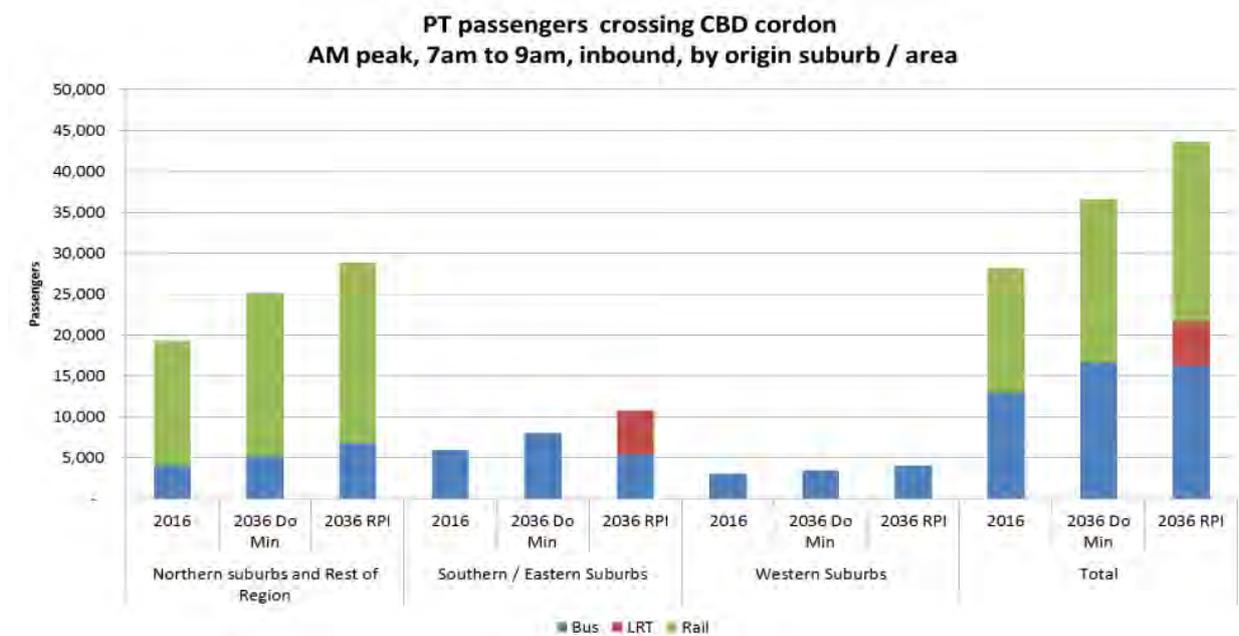


Figure 3 above shows that:

- The largest increase in demand for travel to the central city by public transport is expected to be for travel by rail from the north, and
- The demand for travel to the central city by bus is also expected to increase, particularly from the eastern and southern suburbs.

Figure 3 does not take into account passenger interchange and does not reflect that most journeys involve more than one form of transport. Some of the people entering the central city by train, may need to continue their journey by bus to major destinations, such as, the Wellington Regional Hospital and Wellington International Airport. Many of those travelling by rail to work in the central city will walk to reach their destination from the Wellington Station.

Given that the Golden Mile is the main bus corridor for moving people to and through the central city, the growth in travel demand will mean that the Golden Mile will need to accommodate increased pedestrian throughput and if possible, increase its capacity to carry people on buses.

2.4 Existing and Future Public Transport Demands

The Golden Mile serves as the principal trunk corridor for the Wellington Bus Network, with the majority of bus services using the Golden Mile to travel through the Wellington CBD to reach destinations across the region, including the Wellington Regional Hospital and Wellington International Airport. In addition, the Golden Mile serves as Wellington's prime employment, shopping and entertainment precinct and is therefore an important origin and destination for customers.

As most of Wellington City's high frequency bus services travel along all or part of the Golden Mile, delays incurred on the Golden Mile result in service impacts across the entire bus network. Conversely, improvements in reliability and journey time to buses using the Golden Mile may result in operational benefits far beyond the physical extent of the corridor.

LGWM used transportation models to test the ability for the existing transport network to accommodate additional public transport demand. This work found that without intervention, the public transport network (rail and buses) cannot accommodate the demand forecast for 2036. Without the interventions identified within the LGWM Programme, assumed growth (in population and jobs) could be deferred or occur instead in other areas of the region. The increased bus patronage signalled in the LGWM modelling report¹⁷ will not be realised without an increase in capacity.

Peak hour bus services travelling to and through the Golden Mile are currently approaching capacity, with demand for access exceeding supply in the near future. An additional 25 'growth' buses have been contracted and are scheduled for delivery between April 2021 and July 2022 to accommodate additional patronage demand.

In addition, the period of peak demand (across all modes) is spreading as people choose to travel either earlier or later to avoid the peak period when travel times are longer, and less capacity is available. This trend is evident in bus patronage which is exhibiting longer intervals of peak demand as passengers adjust their travel behaviour.

Another key factor in addressing demand is the reliability of the service. Consistent, reliable travel times encourage passenger confidence in bus services, enabling them to effectively plan their journeys. From an operational perspective, consistent, reliable

¹⁷ Ibid

services mean bus services may be scheduled with maximum efficiency, realising the available capacity on the network.

The Golden Mile, in its current configuration, cannot accommodate an increase in bus throughput without a decline in level of service (i.e. more variable travel times). Any decline in the performance of bus services would be felt across the city as currently most core routes travel along all or part of the Golden Mile.

Reconfiguration of the corridor may enable some increase in peak hour bus throughput, as well as providing opportunities to improve reliability. However, due to the fundamental constraints presented by the limited availability of road space at Willis Street, LGWM has signalled that ultimately a second north-south public transport corridor through the central city will be needed to increase public transport capacity and support future population and employment growth.

2.5 Covid-19 Impacts

Waka Kotahi has been monitoring the impacts of the Covid-19 pandemic across different regions of New Zealand. For the Wellington region, Waka Kotahi has made the following short-term observations: ¹⁸

- The Wellington regional economy is forecast to perform better than many other regions during the Covid-19 slowdown. The main reasons for this are:
 - Public services are forecast to continue to be a significant employment sector in the region with service industries and health expected to grow over the medium to long-term
 - The region's decline in overall employment will be relatively mild, with less negative flow-on effects for consumer spending, the housing market, and the construction sector, and
 - While international visitor numbers have dropped sharply (and are forecast to remain below pre-Covid-19 levels for the foreseeable future), the impact on the Wellington economy may be offset to a degree by an increase in domestic tourism, at least in the short-term.
- Given the relative resilience of the Wellington economy, no significant changes are expected in the nature, scale and location of transport demand over the medium to long-term due to Covid-19. However, some potential impacts on Wellington's land transport system include:
 - A reduction in peak trips to the city centre, due to more people in the professional services industry working remotely
 - The need for transport services to support Covid-19 recovery by improving access to employment and essential services for vulnerable communities, and
 - Ongoing pressure on transport revenue as a result of the Covid-19 lockdown.

Waka Kotahi notes that there is uncertainty regarding what the impacts of Covid-19 might be over the medium to long-term.

¹⁸ See: <https://www.nzta.govt.nz/assets/planning-and-investment/arataki/docs/regional-summary-wellington-august-2020.pdf>

3 Strategic Case

The purpose of the Strategic Case is to:

- Outline the strategic context and alignment of the Golden Mile investment with the LGWM programme
- Identify the key problems to be addressed
- Identify the key investment drivers, including the outcomes and benefits that are sought, and
- Confirm the need for investment in the Golden Mile.

This section of the report summarises the *Golden Mile Strategic Case* (Strategic Case), which is attached as **Appendix A**, which was developed in early 2020 to support the development of the SSBC. Where relevant, updates to the evidence base since completion of the Strategic Case have been included in this report.

3.1 Let's Get Wellington Moving Programme Overview

LGWM is a \$6.4B transport and urban investment programme covering the area from the Ngauranga Gorge to Miramar.

LGWM is managed by a Partnership Board who is ultimately accountable for the programme. The members of the Board are:

- Chief Executive Officer – Wellington City Council
- Chief Executive – Greater Wellington Regional Council
- General Manager for System Design and Delivery – Waka Kotahi, and
- General Manager Rail and Mass Transit Services – Waka Kotahi.

Taranaki Whānui and Ngāti Toa are also members of the Partnership Board.

The LGWM Programme Director is appointed by the Partnership Board, and is responsible for delivery of the overall programme. The LGWM Programme Director is supported by a management team drawn from the partner organisations. The LGWM Management Team is supported by a Programme Leadership Team and various technical advisory groups.

3.1.1 LGWM's Vision

LGWM's Vision for the programme is as follows:

- A great harbour city, accessible to all
- With attractive places
- Shared streets, and
- Efficient local and regional journeys.

To realise the vision more people need to move with fewer vehicles.

3.1.2 Programme Objectives

The LGWM programme objectives were updated in June 2021 as set out in Table 3. The key changes included an updated Liveability Objective description, and replacement of the former Reduced Car Reliance Objective with a new Carbon Emissions and Mode Shift Objective. In addition, the weightings for each of the objectives were updated (they had previously been equally weighted).

Table 3: LGWM Programme Objectives (updated in June 2021)

Objectives	Liveability	Access	Carbon emissions and mode shift	Safety	Resilience
Description	Enhances urban amenity and enables urban development outcomes	Provides more efficient and reliable access for users	Reduces carbon emissions and harmful emissions and increases mode shift by reducing reliance on private vehicles	Improves safety for all users	Is adaptable to disruptions and future uncertainty
Weightings (%)	20	15	40	15	10

3.1.3 Urban Design and Transport Principles

LGWM have 12 guiding design principles to help plan and assess the LGWM programme. These principles are set out in Figure 4 below.

Figure 4: LGWM's Urban Design Principles



3.1.4 LGWM Shared Priorities for the Wellington Region

The LGWM partners have shared priorities for the Wellington region's future as set out in Figure 5 below.

Figure 5: LGWM's Shared Principles for the Wellington Region



3.1.5 LGWM's Three Year Programme

LGWM's programme is split into a Three-Year Programme and a Long-Term Programme. The Golden Mile Project forms part of the Three-Year Programme.

The priorities for the Three-Year Programme are as follows:

- Making travel by bus to and through the central city faster and more reliable, and
- Creating a better environment for people walking and on bikes.

Figure 6 sets out all of the "package elements" that make up the Three-Year Programme.

Figure 6: Three Year Programme's Package Elements



3.2 LGWM Partners

An overview of each of the LGWM partner's roles and functions are set out below.

3.2.1 Waka Kotahi

Waka Kotahi is the crown entity responsible for planning and investing in the land transport system and managing the state highway network. Waka Kotahi administers the National Land Transport Fund (NLTF). Its primary objective is to contribute to an effective, efficient and safe land transport system that is in the public interest. Through its various functions Waka Kotahi is responsible for delivering on the Government's Transport Sector Outcomes¹⁹ to create a transport system that:

- Provides inclusive access
- Supports economic prosperity
- Is resilient and secure
- Provides environmental sustainability, and
- Supports healthy and safe people.

3.2.2 Wellington City Council

WCC is the local authority responsible for Wellington City. Its purpose is to enable democratic local decision-making and action by, and on behalf of, its communities. It seeks to promote the social, economic, environmental, and cultural well-being of people that live, work or visit Wellington now and in the future.

WCC invests in making Wellington more resilient, vibrant and competitive, and makes sure that residents continue to have a high quality of life.

The strategy and vision for Wellington (Towards 2040: Smart Capital) is built on its current strengths but also recognises the challenges the city faces now and over the medium to long term. The Towards 2040: Smart Capital goals²⁰ for Wellington are:

- A people centred city
- A connected city
- An eco-city, and
- A dynamic central city.

3.2.3 Greater Wellington Regional Council

GWRC is responsible for promoting *Quality for Life* by ensuring the environment of the Wellington region is protected while meeting the economic, cultural and social needs of the community. One of its responsibilities is the management of public transport services across the Wellington region, including arranging funding and contracts for service delivery. GWRC's activities aim to contribute towards the following outcomes²¹:

- A strong economy
- Connected communities
- Resilient communities

¹⁹ See: <https://www.transport.govt.nz/multi-modal/keystrategiesandplans/transport-outcomes-framework/>

²⁰ See: <https://wellington.govt.nz/your-council/structure-and-vision/vision-2040/towards-2040-smart-capital>

²¹ See page 13 of <https://www.gw.govt.nz/assets/Long-term-plan-2018/Greater-Wellington-Regional-Councils-Long-Term-Plan-2018-281.3.pdf>

- A healthy environment, and
- An engaged community.

3.2.4 Mana Whenua

Iwi with interests in Wellington are:

- Taranaki Whānui represented by the Port Nicholson Block Settlement Trust, and
- Ngāti Toa represented by Te Rūnanga o Toa Rangatira.

3.2.5 Functions of the Let's Get Wellington Moving Partners

Table 4 provides a summary of the functions of each LGWM partner.

Table 4: Relevant Functions of LGWM Partners

Partners	Functions
WCC	<ul style="list-style-type: none"> • Planning land use and managing urban growth • Provision and operation of walking, cycling and local road networks • Managing and regulating kerbside controls (i.e. parking, loading, bus stops) • Traffic management (i.e. intersection controls, road stopping, road space allocation) • Street operations and maintenance, and • Part funding local road development, operations and maintenance using rates contributions.
GWRC	<ul style="list-style-type: none"> • Strategic transport planning for the region (e.g. Wellington Regional Land Transport Programme) • Contracting public transport services (i.e. bus, train and harbour ferry) • Provision of Total Mobility services; and • Part funding public transport operations using rates contributions.
Waka Kotahi	<ul style="list-style-type: none"> • Investor in land transport system through allocation of the NLTF • Provision and operation of the state highway network, and • Regulator of access to and use of the land transport system.
Taranaki Whānui	<ul style="list-style-type: none"> • Mana whenua
Ngāti Toa	<ul style="list-style-type: none"> • Mana whenua

3.2.6 Other Stakeholders

The key stakeholders and interest groups that have an interest in the Golden Mile Project are as follows (but are not necessarily limited to):

- Wellington Chamber of Commerce
- Retail NZ
- Hospitality NZ
- Retail businesses (Golden Mile general)
- Hospitality businesses (Golden Mile general)
- Businesses general

- Inner city residents (all)
- Cycle Aware (Wellington)
- Living Streets Aotearoa
- AA Wellington
- ACC Accessibility Advisory Group
- Taxis and rideshare companies (all)
- Commercial road users – Heavy Haulage, Road Transport Forum (RTF), Road Transport Association (RTA)
- NZ Police, and
- Utilities (all).

3.3 External Factors Driving Investment

In order to understand key external influences on the need to invest, a preliminary PESTLE (which is a high-level scan of the key Political, Economic, Social, Technological, Legal, and Environmental factors) was undertaken to help inform development of the SSBC. The Golden Mile PESTLE is set out in Table 5 below.

Table 5: Golden Mile PESTLE

Dimension	Remarks / Comments
Political	<ul style="list-style-type: none"> • New Government Policy Statement (GPS) on Land Transport 2021, including updated strategic priorities focusing on safety, better travel options, improving freight connections and climate change • Wellbeing component being woven into all aspects of funding and decision-making • Increased focus on climate change emission reductions (both at central and local government levels) through greater uptake of public transport and active modes • Increased focus on liveability improvements (both at central and local government levels), and • WCC’s new spatial plan includes a focus on increased intensification of the Wellington CBD.
Economic	<ul style="list-style-type: none"> • The Golden Mile is the heart of the Wellington CBD, which in turn is the Wellington region’s main employment hub • The Golden Mile is a key retail / business / hospitality / entertainment precinct for Wellington City and the wider region • The streets that make up the Golden Mile have distinct economic generating characteristics (e.g. Lambton Quay is weekday / business focused, Courtenay Place has a popular night time economy) • The Golden Mile is a vital part of the Wellington Bus Network, and therefore is critical for moving people to and from employment in the CBD and for the wider city • Long term recovery of businesses from Covid-19 is uncertain • There are likely to be positive and negative impacts on retailers / businesses from changing the form and function of the Golden Mile transport network, and • There are likely to be impacts on WCC revenue from reduced on-street car parking from the Golden Mile.

Dimension	Remarks / Comments
Social / Cultural	<ul style="list-style-type: none"> • LGWM and mana whenua are partners on LGWM • Te Aro Pa / Te Aro Park is of high importance for mana whenua. Kumutoto Kainga and Waitangi Lagoon, which are located near the Golden Mile, are also important to mana whenua • The Golden Mile follows the old Wellington Harbour shoreline • There are a high number of heritage buildings and sites located near the Golden Mile • Population in the Wellington CBD is expected to increase over the next 30 years, and there is expected to be more people living in the CBD consequently • Employment within the Wellington CBD is expected to grow over the next 30 years, and • Anti-social behaviour is a current issue on and around Courtenay Place and Manners Street.
Technological	<ul style="list-style-type: none"> • There are more transport mode options available for accessing the Golden Mile (e.g. e-bikes, electric scooters, electric vehicles) • Bus / signal / pedestrian optimisation technology is evolving and is becoming increasingly available, and • Enforcement technology for controlling traffic and active modes is evolving and is becoming increasingly available.
Legal / Legislative	<ul style="list-style-type: none"> • Potential regulatory changes for micro-mobility speeds (and cyclists allowed to use footpaths), and • Traffic resolution processes will be required for controlling access to the Golden Mile.
Environment	<ul style="list-style-type: none"> • Golden Mile is “noise / dust / vibration sensitive”, and • Wellington City has a net zero emissions by 2050 target.

3.4 Alignment to National, Regional and Local Policies / Strategies

This section of the report provides a summary of how the Golden Mile Project is expected to contribute to, or align, with the strategic goals of key national, regional and local policies / strategies.

3.4.1 Alignment with National Policies and Strategies

Table 6 sets out the alignment assessment of the Golden Mile Project against the key national policies / strategies.

Table 6: Alignment with National Policies and Strategies

Policy / Strategy	Relevant Policies	Alignment
Government Policy Statement on Land Transport 2021/22-2030/31	<p>The four strategic priorities for investment:</p> <ol style="list-style-type: none"> 1. Safety: developing a transport system where no-one is killed or seriously injured 2. Better travel options: providing people with better transport options to access social and economic opportunities 	<ol style="list-style-type: none"> 1. STRONG: seeks to reduce the number of pedestrian crashes 2. STRONG: seeks to improve public transport, active mode and micro-mobility options 3. WEAK: no specific freight-related investment objective 4. STRONG: seeks to increase the uptake of public transport, active mode and micro-mobility option,

	<ol style="list-style-type: none"> 3. Improving freight connections: improving freight connections for economic development 4. Climate change: developing a low carbon transport system that supports emission reductions, while improving safety and inclusive access. 	<p>which are all lower carbon transport options.</p>
<p>Arataki Version 2 – Waka Kotahi’s 10-year plan</p>	<p>The key step changes are:</p> <ol style="list-style-type: none"> 1. Improve urban form: improve connections between people, product, and places by planning land-use well and promoting an integrated transport system 2. Transform urban mobility: shift reliance on private vehicles to more sustainable transport solutions for the movement of people and freight 3. Significantly reduces harm: transition to a transport system that reduces deaths and serious injuries (DSIs) and improves public health 4. Tackle climate change: enhance communities’ long-term resilience to the impacts of climate change and support the transition to a low-emissions economy 5. Support regional development – optimise transport’s role in enabling regional communities to thrive socially and economically. 	<ol style="list-style-type: none"> 1. STRONG: seeks to improve pedestrian level of service (LoS), placemaking and public transport 2. STRONG: seeks to improve public transport and walking, which will encourage mode shift away from PMVs 3. MODERATE: seeks to improve pedestrian safety and LoS 4. STRONG: seeks to improve public transport and walking, which have lower carbon transport options than PMV use 5. STRONG: will support people to live, play and work in the CBD.
<p>Road to Zero 2020 – 2030 – NZ’s road safety strategy</p>	<p>There are five key focus areas under Road to Zero:</p> <ol style="list-style-type: none"> 1. Infrastructure improvements and speed management 2. Vehicle safety 3. Work-related road safety 4. Road user choices 5. System management. 	<ol style="list-style-type: none"> 1. STRONG: seeks to improve active mode safety 2. WEAK: no specific vehicle safety outcomes sought 3. WEAK: no specific work-related road safety outcomes sought 4. STRONG: seeks to increase public transport, active mode and micro-mobility choices 5. WEAK: no specific system management outcomes sought.

3.4.2 Alignment with Regional Policies and Strategies

Table 7 sets out an alignment assessment of the Golden Mile Project against the key regional policies / strategies.

Table 7: Alignment with Regional Policies and Strategies

Policy / Strategy	Relevant Policies	Alignment
Wellington Regional Land Transport Plan 2021	<p>The priority areas for investment are:</p> <ol style="list-style-type: none"> 1. Public transport capacity: build capacity and reliability into the Wellington Region’s rail network and into Wellington City’s public transport network to accommodate future demand 2. Travel choice: make walking, cycling and public transport a safe and attractive option for more trips throughout the region 3. Strategic access: improve access to key regional destinations, including the port, airport and hospitals, for people and freight 4. Safety: improve safety, particularly at high-risk intersections and on high-risk urban and rural roads 5. Resilience: build resilience into the region’s transport network by strengthening priority transport lifelines and improving redundancy in the system. 	<ol style="list-style-type: none"> 1. STRONG: seeks to improve the efficiency of bus movements along the Golden Mile, which will in turn have efficiencies for the wider bus network 2. STRONG: seeks to improve public transport and active mode options and pedestrian safety 3. MODERATE: seeks to improve public transport along the Golden Mile, which would improve travel options to and from regional destinations such as the hospital 4. STRONG: seeks to improve active mode safety 5. MODERATE: seeks to improve public transport reliability along the Golden Mile.
Wellington Regional Public Transport Plan 2021-2031	<p>The strategic priorities for investment are:</p> <ol style="list-style-type: none"> 1. Increase public transport and active transport mode share: provide a high quality, high capacity, high frequency core network; improve access to public transport; promote behaviour change 2. Reduce public transport emissions by accelerating decarbonisation of the public transport vehicle fleet 3. Improve customer experience across all aspects of the network: provide greater choice and flexibility for journey planning, fares and fare payment options; improve the accessibility of public transport for all users; improve information; improve shelter. 	<ol style="list-style-type: none"> 1. STRONG: seeks to improve the bus network and active mode options along the Golden Mile 2. WEAK: no vehicle related emission outcomes sought 3. STRONG: seeks to improve bus customer experience by improving the performance of the bus network.
GWRC Long Term Plan 2018-28	<p>Four key investment priorities are:</p> <ol style="list-style-type: none"> 1. Fresh water quality and biodiversity 2. Water supply 3. Regional resilience 4. Public transport. 	<ol style="list-style-type: none"> 1. WEAK: no specific water quality and biodiversity outcomes sought 2. WEAK: no specific water supply outcomes sought

Policy / Strategy	Relevant Policies	Alignment
		<ul style="list-style-type: none"> 3. WEAK: no specific regional resilience outcomes sought 4. STRONG: seeks to improve public transport.
Wellington Regional Growth Framework	<p>The framework objectives are to:</p> <ul style="list-style-type: none"> 1. Increase housing supply, and improve housing affordability and choice 2. Enable growth that protects and enhances the quality of the natural environment and accounts for a transition to a low / no carbon future 3. Improve multi-modal access to and between housing, employment, education and services 4. Encourage sustainable, resilient and affordable settlement patterns / urban form that make efficient use of existing infrastructure and resources 5. Build climate change resilience and avoid increasing the impacts and risks from natural hazards 6. Create employment opportunities. 	<ul style="list-style-type: none"> 1. WEAK: no specific housing-related outcome sought 2. MODERATE: seeks to improve public transport and active mode provision, which are low carbon transport options 3. STRONG: seeks to improve public transport and active mode access to the Wellington CBD 4. MODERATE: seeks to maximise the capacity of the existing Golden Mile corridor by improving public transport and active modes 5. WEAK: no specific climate change resilience outcomes sought 6. WEAK: no specific employment outcomes sought.

3.4.3 Alignment with Local Policies and Strategies

Table 8 sets out the alignment assessment of the Golden Mile Project against the key local policies / strategies.

Table 8: Alignment with Local Policies and Strategies

Policy / Strategy	Relevant Policies	Alignment
Wellington Urban Growth Plan 2014-2043	<p>The plan seeks to deliver the following key outcomes:</p> <ul style="list-style-type: none"> 1. A compact city: direct future development to existing urban areas with good transport links, infrastructure and community facilities, and to a limited number of new urban areas 2. A livable city: ensure the city remains attractive, lively, accessible and safe 3. A city set in nature: ensure urban growth respects and enhances our natural environment 4. A resilient city: improve the resilience of the city against the risk of natural hazards and climate change. 	<ul style="list-style-type: none"> 1. STRONG: seeks to support urban intensification objectives for the Wellington CBD 2. STRONG: seeks to improve liveability through improved public transport, active modes and public spaces 3. MODERATE: provides opportunities to increase public open spaces 4. WEAK: no specific resilience-related outcomes sought.

Policy / Strategy	Relevant Policies	Alignment
<p>Our City Tomorrow: Spatial Plan for Wellington City</p>	<p>The WCC Spatial Plan's six goals for the city are as follows:</p> <ol style="list-style-type: none"> 1. Compact: build on the city's layout and structures (its urban form), and make sure we have quality development in the right places 2. Resilient: healthy and robust natural and built environment; good design to encourage physical activity and interaction that fosters social resilience 3. Vibrant and prosperous: welcome social and cultural diversity; support innovation and invest strategically to maintain a thriving economy 4. Inclusive and connected: connected by a world-class transport system, and have attractive and accessible public spaces that support our diverse community and cultural values 5. Greener: protect and value our natural environment; thriving pockets of nature in the city 6. In partnership with mana whenua: recognise mana whenua's important role and actively partner with them. 	<ol style="list-style-type: none"> 1. MODERATE: improving public transport and active mode choices will support the city's layout 2. MODERATE: improving public transport and active mode options will help to improve social resilience 3. WEAK: no specific social or cultural-related outcomes sought 4. STRONG: seeks to improve public transport, active modes and provide more / enhanced public spaces 5. MODERATE: provides opportunities to increase public open spaces 6. STRONG: provides opportunities to recognise and protect the importance of the Golden Mile / Te Aro Pa for mana whenua.
<p>Wellington Towards 2040: Smart Capital</p>	<p>The strategy's four goals are as follows:</p> <ol style="list-style-type: none"> 1. Eco city: take an environmental leadership role as the Capital of clean and green New Zealand 2. Connected city: link people, places and ideas to networks across physical, virtual and social connections 3. People-centered city: be a healthy, vibrant, affordable and resilient city with a strong sense of identity and 'place' 4. Dynamic central city: be a place of creativity, exploration and innovation, offering the lifestyle of a much larger city. 	<ol style="list-style-type: none"> 1. STRONG: seeks to improve public transport and active mode choices to encourage mode shift away from PMVs 2. MODERATE: seeks to improve public transport and active mode connectivity 3. STRONG: seeks to improve public transport, active modes and provide more / enhanced public spaces 4. MODERATE: seeks to improve public transport and provide additional public open spaces.
<p>Te Atakura First to Zero: Wellington City's Zero Carbon Implementation Plan 2020-2030</p>	<p>The plan's four action areas are as follows:</p> <ol style="list-style-type: none"> 1. Transportation: a rapid reduction in fossil fuel vehicles in favour of public transport, electric vehicles, shared mobility, cycling, walking and remote working 	<ol style="list-style-type: none"> 1. STRONG: seeks to improve public transport and active modes to encourage mode shift away from PMVs (the majority of which are fossil fuel-powered)

Policy / Strategy	Relevant Policies	Alignment
	<ol style="list-style-type: none"> 2. Building energy and urban form: substantial gains in energy efficiency and a shift from gas and coal to renewable electricity; improve urban form to maximise compactness and make the city more about people and less about cars 3. Advocacy: use our relationships and position to argue for better regulatory and policy frameworks 4. The Council itself: walk our talk and demonstrate leadership by reducing our own emissions. 	<ol style="list-style-type: none"> 2. MODERATE: seeks to make the Wellington CBD more about people and less about PMVs 3. WEAK: does not seek to improve advocacy 4. WEAK: does not seek to improve WCC.
<p>Wellington City Long Term Plan 2021-31</p>	<p>The priority objectives of the plan are as follows:</p> <ol style="list-style-type: none"> 1. A functioning, resilient and reliable three waters infrastructure 2. Wellington has affordable, resilient and safe housing 3. The city's core transport infrastructure is a safe, resilient, reliable network that supports active and public transport choices, and an efficient, productive and an environmentally sustainable economy 4. The city has resilient and fit-for-purpose community, creative and cultural spaces 5. An accelerating zero-carbon and waste free transition 6. Strong partnerships with mana whenua. 	<ol style="list-style-type: none"> 1. WEAK: no specific three water-related outcomes sought 2. WEAK: no specific housing-related outcomes sought 3. STRONG: seeks to improve public transport and active modes along a key section of the transport network 4. MODERATE: seeks to improve public open spaces 5. STRONG: seeks to improve public transport and active modes, which will encourage mode shift away from PMVs 6. MODERATE: provides opportunities to recognise and protect the importance of the Golden Mile / Te Aro Pa for mana whenua.
<p>Wellington City District Plan (i.e. the eight principles for the Central Area)</p>	<p>The eight principles for the Central Area are as follows:</p> <ol style="list-style-type: none"> 1. Enhance 'sense of place' 2. Sustain the physical and economic heart of the Central Area 3. Enhance the role of the 'Golden Mile' and 'Cuba' 4. Enhance the Central Area as a location for high quality inner city living 5. Enhance the built form of the Central Area 6. Enhance the quality of the public environment 7. Enhance city / harbour integration 8. Enhance the sustainability of the Central Area. 	<ol style="list-style-type: none"> 1. STRONG: seeks to create / enhance public open spaces along the Golden Mile 2. MODERATE: seeks to improve physical attributes along the Golden Mile to support walking, public space and public transport 3. STRONG: seeks to enhance the Golden Mile public transport and active mode provisions, and to provide new open spaces 4. STRONG: seeks to enhance the Golden Mile public transport and active mode provisions, and to provide new open spaces, which will benefit residents 5. WEAK: no specific building-related outcomes sought

Policy / Strategy	Relevant Policies	Alignment
		<ul style="list-style-type: none"> 6. STRONG: seeks to enhance the quality of the Golden Mile through provision of improved public spaces 7. MODERATE: provides opportunities to connect the Golden Mile with other parts of the city and the harbour 8. STRONG: seeks to improve public transport and active mode provisions, and to provide new open spaces.
<p>WCC Walking Policy 2008</p>	<p>Strategic intent of the policies are as follows:</p> <ul style="list-style-type: none"> 1. To promote the benefits of walking so that more people walk 2. To improve pedestrian safety throughout the city 3. To improve the experience of those walking through or about the Central Area 4. To increase the number of commuter trips taken by foot to and from the Central Area 5. To improve the experience of those walking to and from public transport stops 6. To increase the number of short walking trips to and from Suburban Centres 7. To increase the number of walking trips made to and from educational centres and the regional hospital. 	<ul style="list-style-type: none"> 1. STRONG: seeks to improve pedestrian LoS and safety 2. STRONG: seeks to improve pedestrian safety 3. STRONG: seeks to improve pedestrian LoS and safety in the city centre 4. STRONG: seeks to improve pedestrian LoS and safety in the city centre 5. STRONG: seeks to improve walking connections to public transport 6. WEAK: does not relate to improvements in walking in suburban centres 7. WEAK: does not relate to improvements in walking to and from educational centres and the regional hospital.
<p>WCC Parking Policy 2020</p>	<p>The objectives of the policy are as follows:</p> <ul style="list-style-type: none"> 1. Facilitate a shift to using active (eg, walking and cycling) and public transport through parking management and pricing, to move more people driving fewer vehicles 2. Facilitate the safe and efficient movement of people and goods by focusing on people moving along transport corridors rather than people parking or storing stationary vehicles 3. Ensure parking management and pricing controls support economic activity in the central city, suburban centres and mobile trades and services 	<ul style="list-style-type: none"> 1. STRONG: seeks to improve walking and public transport journeys, encouraging mode shift away from PMVs 2. STRONG: seeks to increase walking and public transport throughput along the Golden Mile corridor 3. MODERATE: opportunity to reallocate space to support businesses, business customers and residents 4. MODERATE: opportunity to ensure any on-street parking supports overall amenity 5. STRONG: opportunity to increase mobility parking and access 6. MODERATE: opportunity to include provisions for car sharing

Policy / Strategy	Relevant Policies	Alignment
	<ol style="list-style-type: none"> 4. Ensure on-street parking design and placement supports overall city amenity, safety, community building, heritage, creative arts, good urban design outcomes and attractive streetscapes 5. Ensure disabled people, older people, people who are pregnant, and people with babies can access the city, Council facilities, and venues, achieved, in part, through an improvement in mobility parking across the city 6. Facilitate the uptake of car sharing, electric vehicles and other transport with low carbon emissions 7. Provide a high standard of customer service for people who use Council parking spaces to support users to make well-informed parking decisions. 	<ol style="list-style-type: none"> 7. WEAK: no specific parking-related outcome sought.
Pōneke Promise	This joint initiative seeks to improve safety, vibrancy and compassion within the inner city, primarily focused on Courtenay Place and the surrounding area. Projects include a taxi trial and improved lighting on Courtenay Place, improvements to Te Aro Park and additional funding for the Take 10 late-night safe zone.	Opportunity to incorporate strategic outcomes sought by the Pōneke Promise in the design of the Golden Mile's infrastructure changes.
WCC Fossil Fuel Free Central City by 2025	A report to investigate a Wellington Fossil-Fuel Free Central City by 2025.	Alignment yet to be determined.

WCC Proposed Strategic Cycling Network

It is noted that WCC has developed a proposed strategic cycling network for the central city.²² As set out in Figure 7 below, Courtenay Place and a segment of Willis Street (to Mercer Street) are a part of this strategic cycling network. The figure also shows this proposed network crosses the Golden Mile at Taranaki Street (with a connection to Dixon Street) and Victoria Street. The level of service to be provided along the strategic cycling network is yet to be determined by WCC.

²² Golden Mile Strategic Case (June 2020), see Appendix B (Golden Mile Problem Definition and Case for Change), page 65

Figure 7: Proposed WCC Central City Cycle Network²³



3.4.4 Summary of Strategic Alignment

The outcomes sought by LGWM for the Golden Mile Project generally align with national, regional and local transport and urban development priorities. The project aligns most strongly with priorities to improve public transport and active modes (and active mode safety).

3.5 One Network Road Classification

Table 9 provides a summary of the characteristics and volumes of the streets that make up the Golden Mile. This table also includes the One Network Road Classification (ONRC) status for each street.

Table 9: Golden Mile ONRC Classification

Street	Cars (ADT)	HCV %	ONRC Classification
Lambton Quay	13,500	5	Arterial
Willis Street	16,000	5	Arterial
Manners Street	6,000	6	Arterial
Courtenay Place	20,700	5	Arterial

Table 10 summarises the performance of the current Golden Mile corridor against the provisional ONRC fit for purpose customer levels of service (CLOs).

²³ The dotted black line is the Golden Mile

Table 10: ONRC Fit for Purpose CLoS Performance

Criteria	Target	Current
Travel Time Reliability	Generally, road users experience consistent travel times with some exceptions in urban heavy peak, holidays, during major events or during moderate weather events.	Bus travel times fluctuate considerably across segments of the Golden Mile and are slowest during the evening peak period. Midblock pedestrian LoS of E to F on key sections of the Golden Mile during the interpeak suggest that pedestrian travel times are unreliable.
Resilience	Route is nearly always available except in major weather events or emergency event and where no other alternatives are likely to exist. Clearance of incidents affecting road users will have a high priority. Road users may be advised of issues and incidents.	The Golden Mile is nearly always available except in infrequent major weather events, emergencies, planned protests and community events.
Optimal Speeds (Safety and Efficiency)	Higher speeds depending on assessed level of risk. Lower if mixed use, high intersection density, schools, shopping, concentrations of active road users. In urban areas travel speeds depend on assessed level of risk and recognise mixed use, schools, shopping strips and concentrations of active road users.	The Golden Mile corridor and most of the surrounding streets ²⁴ have a 30km / h speed limit. This is an appropriate speed for a densely populated area with high pedestrian volumes.
Safety	Variable road standards, lower speeds and extra care required on some roads/sections particularly depending on topography, access, density and use. Road user safety guidance provided at high risk locations. Some separation of road space for active road users in urban areas.	Safety is a concern on the Golden Mile due to the high concentrations of pedestrians in close proximity to PMVs, creating potential conflicts. From 2009 to 2018, there were nearly 500 reported crashes on the Golden Mile (of which 40 resulted in DSIs). Pedestrians and cyclists accounted for 95 per cent of DSIs, despite only being involved in 28 per cent of recorded crashes. Social safety, particularly at night, is also a concern on Courtenay Place and surrounding areas.
Amenity	Good level of comfort, occasional areas of roughness. Aesthetics of adjacent road environment reflects journey experience needs of both road users and land use. Urban	The Golden Mile has insufficient space for pedestrians which leads to overcrowding, visual and physical clutter in the footway,

²⁴ Cambridge Terrace and Kent Terrace have a 50km / h speed limit

Criteria	Target	Current
	arterials reflect urban fabric and contribute to local character. Some separation of road space for active road users for amenity outcomes in urban areas. Clean and secure [lighting, good PT and cycle numbers, including park and ride and cycle park facilities, and weather protection for PT users] ²⁵ .	poor quality connections and legibility, few and poor-quality public spaces.
Accessibility	Some land use access restrictions for road users, both urban and rural. Road user connection at junctions with National, Arterial or Collector roads, and some restrictions may apply in urban areas to promote Arterials. Traffic on higher classified roads generally has priority over lower order roads. [Numerous bus stops with high frequency services to key destinations and interchanges] ²⁵ . Some separation of road space for active road users in urban areas to provide network access and journey continuity. [Parking for all modes and facilities for mobility impaired at activity centres, and some shared spaces.] ²⁵ Extra care required around activity centres due to mixed use, including goods vehicles. Provision of quality information relevant to Arterial road user needs.	Most of the length of the Golden Mile can be used by all user groups, apart from segments of Bus Only lanes that restrict general traffic and bicycles. E-scooters are not permitted on the footpath along the entire length of the Golden Mile. Vehicle access to properties is restricted along the entire length of the Golden Mile. This is appropriate for an urban city centre.

3.5.1 Summary of ONRC Alignment

Overall, the Golden Mile performs poorly against the travel time reliability, safety, and amenity CLoS criteria.

3.5.2 One Network Framework

The ONRC is set to be replaced by a new national classification system called the One Network Framework (ONF). This new road classification system will be fully operative for the NLTF 2024-27 period.

Based on the ONF Current Function Classification Guidance²⁶, the streets that make up the Golden Mile are likely to be classified as either P1 city centre or P2 town / sub-centre (for the *place* function) and either M1 major or M2 significant (for the *movement* function). Ultimately, this would mean that the Golden Mile would be classified as either City Hubs or Main Streets, as shown in Figure 8 below.

²⁵ Descriptions in square brackets indicate guidance for the AMP Group preparing performance measures and targets and will be removed from the final customer level of service descriptors

²⁶ See: <https://www.nzta.govt.nz/assets/Roads-and-Rail/onf/docs/ONF-Current-Function-Classification-Guidance.pdf>

Figure 8: ONF Urban Street Categories

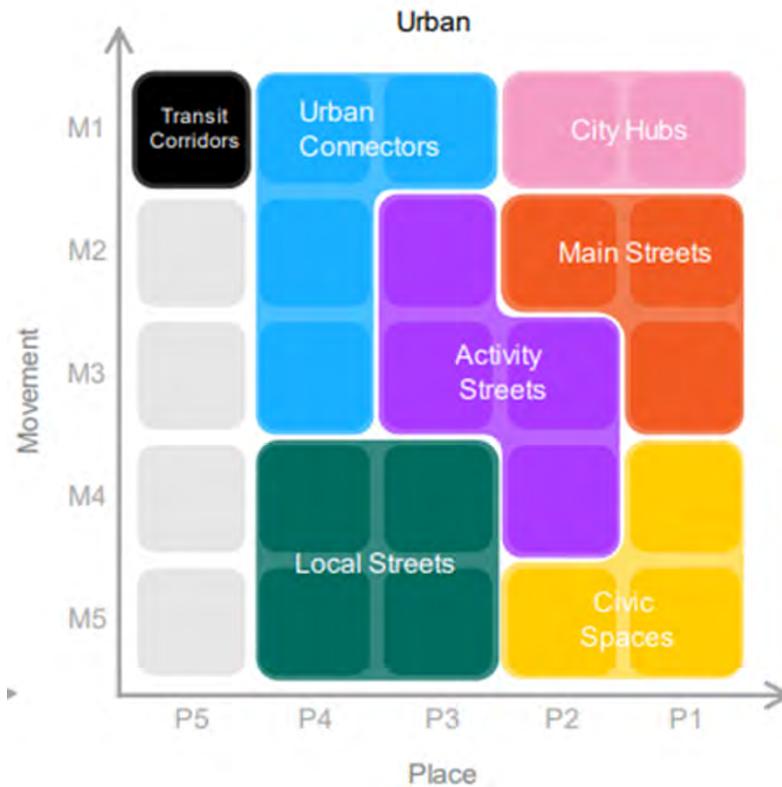


Table 11 describes the attributes of the P1 and P2 *place* classifications and compares them to the attributes of the Golden Mile.

Table 11: ONF Place Classification - P1, P2 and the Golden Mile

	Criteria	P1 City Centre	P2 Town/sub-centre	Golden Mile
Classification Factors	Spatial Significance	Location / destination that provides social, economic and cultural significance at a city scale	Location / destination provides social, economic and cultural significance at a town/subcentre scale	Key destination that provides social, economic and cultural significance at a city scale
	Activity	Places where the highest human activity occurs. Large numbers of people live, work and visit	Centres where people work, shop and visit. In growing urban areas, where more and more people live. Town main streets and places with significant meaning	The highest density area for work and living within the Wellington region
	Physical Form	Very high-density mixed use (high rise apartments and office towers), downtown retail, commercial centres and large venues	Diverse mixed use, low rise apartments, special zones or high density commercial/retail	A mix of high and medium density buildings in different segments along the Mile

	Criteria	P1 City Centre	P2 Town/sub-centre	Golden Mile
Metrics and Correlated Land-use Zones	Pedestrian Volume	Aligned to W1 ²⁷ , >1000/hour (peak), >5,000/day	Aligned to W127,W2 ²⁸ , >2,500/day	<ul style="list-style-type: none"> Lambton Quay: 29,000 people / day Willis Street: 31,500 people / day Manners Street: 13,000 people / day Courtenay Place: 13,000 people / day
	Land-use Zone Classification	City Centre zone, Special purpose zones: Convention centre, Stadium zone, Tertiary education zone	Metropolitan Centre zone, High Density Residential Zone, Commercial zone	Central Area Zone, Open Space A Zone and Heritage Sites (overlays)
	Activity Generating Facilities	City Centre Significant Locations: Central Business Districts, Central Metro Stations, Sports Stadiums and Event Arenas, University and Polytechnic Campuses, Convention centres, Waterfronts, riverside boulevards	City/District Significant Locations: Main Shopping Centres, Transport Interchanges, Secondary Schools, Main regional tourist attractions, Central city parks	Central Business Districts, Main Shopping Centres, Central city parks, Main Public Transport Spine, Regional tourist attractions
	The Intensity of People Dwelling	>4 Person hours/m ² /day (7am to 5pm)	>2 Person hours/m ² /day (7am to 5pm)	Unknown

Table 12 describes the attributes of the M1 and M2 movement classifications and compares them to the attributes of the Golden Mile.

Table 12: ONF Movement Classification - M1, M2 and the Golden Mile

Criteria	M1 Major	M2 Significant	Golden Mile
Nature of Movement and Strategic Hierarchy	Mass movement of people and / or goods on routes of national or regional strategic importance	Movement of people and / or goods on inter-regional routes or primary corridors linking main centres	Most bus services that travel to or through the central city use the Golden Mile. The Golden Mile is also a key route for people walking in the city centre. It is not however a key (through) freight route

²⁷ W1: Key routes within primary walking catchments connecting pedestrians with key destinations and places of significance

²⁸ W2: Key routes within secondary walking catchments, providing key connections to local destinations and providing access to W1 networks

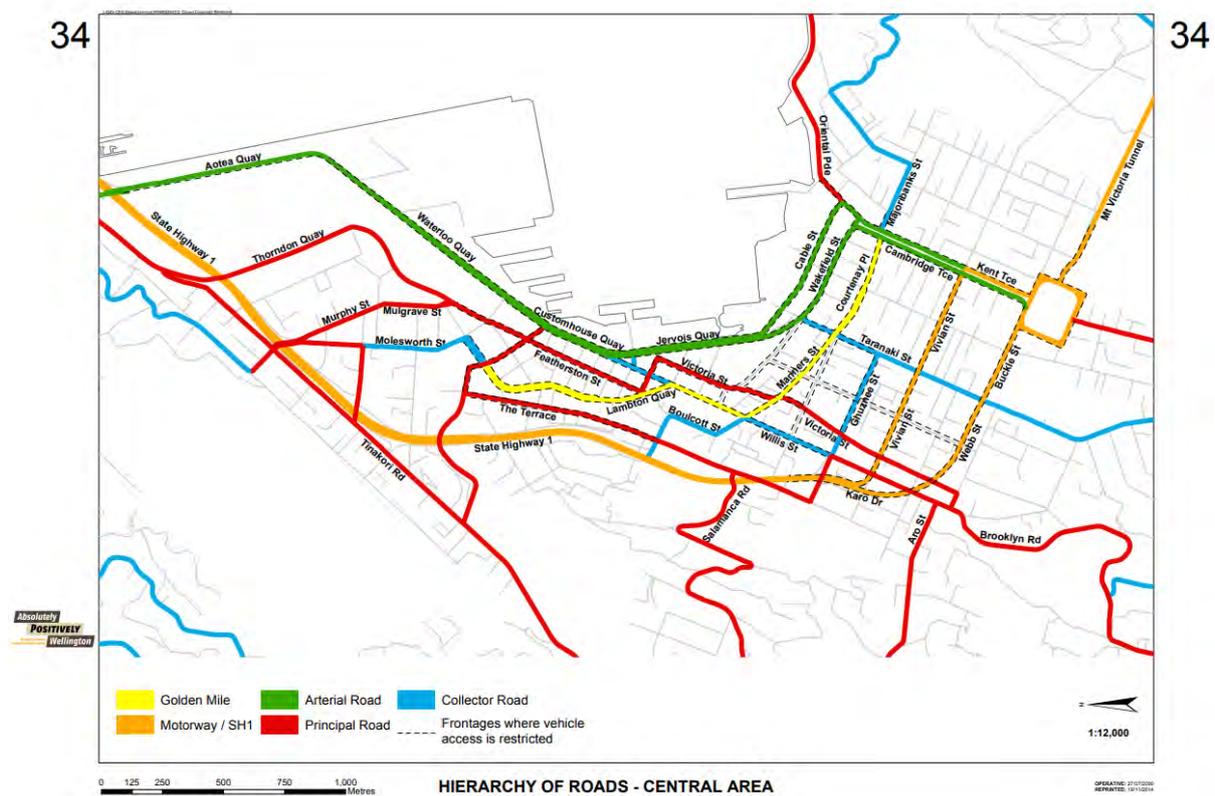
Criteria	M1 Major	M2 Significant	Golden Mile
Scale of People Movement	Typically, >20,000 per day	10,000-25,000 per day	<ul style="list-style-type: none"> Lambton Quay: 63,000 people / day Willis Street: 70,000 people / day Manners Street: 40,000 people / day Courtenay Place: 40,000 people / day

At the time of writing this report, future service outcome and performance measures for the ONF were not available. Additional guidance on the ONF is expected to be released by Waka Kotahi later in 2021.

3.6 Wellington District Plan Road Hierarchy

As set out in Figure 9, the WCC District Plan’s Road Hierarchy (Planning Map 34) specifically defines the streets that make up the Golden Mile as “The Golden Mile”.

Figure 9: WCC District Plan’s Road Hierarchy for the Wellington CBD



Section 3.10 of the WCC District Plan defines each component of the Road Hierarchy as follows:

- Motorway: high standard limited access roads designed to carry long distance through traffic at speed (primary road)
- Arterial Road: high standard limited access roads designed to carry long distance through traffic (primary road)

- Principal Road: roads that provide access to motorways and to arterial roads having a dominant through-traffic function and carrying the major public transport routes (primary road)
- Collector Road: roads that distribute traffic between and within local areas and form the link between principal and secondary roads (secondary road), and
- Sub-collector Road: roads that distribute traffic within the local area and form the link between collector and local roads (secondary road).

The Golden Mile does not have a separate road hierarchy definition, although Section 3.10 of the WCC District Plan does however define the Golden Mile as the:

“properties that either front or gain access from the main retail and commercial strip extending from the Cenotaph (near Parliament Buildings) to the eastern end of Courtenay Place (see Map 34 Volume III).”

Furthermore, Chapter 12.1 of the WCC District Plan defines the principles for the provisions for the Central Area Zone (which is considered the predominant zone for the Golden Mile). Of particular relevance are the following two principles:

“12.1.3 Enhance the role of the ‘Golden Mile’ and ‘Cuba’ (The ‘Golden Mile’ refers to the main retail and commercial strip extending from the Cenotaph near Parliament Buildings, to the eastern end and entertainment hub of Courtenay Place. This ‘Golden Mile’ concept reflects the natural form of the Central Area and helps structure people’s perceptions of the city and the way they move within it. Cuba Street is a premier pedestrian-based retail promenade that forms an important axis with the ‘Golden Mile’. The ‘Golden Mile’ and ‘Cuba’ will be enhanced and supported by reinforcing their key retail function, promoting nearby office location, enhancing the pedestrian environment and improving the roll-out of quality public transport infrastructure.), and

12.1.4 Enhance the Central Area as a location for high quality inner city living (including increasing the amount and quality of residential dwellings will be encouraged, building on the overall vibrancy of the Central Area and supporting the primary commercial function of downtown Wellington and the ‘Golden Mile’).”

3.7 Golden Mile Vision 2036 Statement

The first step in development of the Strategic Case and the SSBC was to develop a vision statement (and supporting principles).

In early 2020, LGWM developed the *Golden Mile Vision 2036 Statement* (Vision 2036), which is attached in full as **Appendix B** and summarised below in Figure 10.

Figure 10: Golden Mile Vision 2036

Golden Mile Vision

The Golden Mile gets Wellington moving by...

Connecting people across the central city with a reliable public transport system that is in balance with an attractive pedestrian environment.



WHAT THIS LOOKS LIKE:

RELIABLE NETWORK

Golden Mile is core to the public transport network, reliably connecting people to and through the central city.

REFLECTING PLACE

Golden Mile streets and spaces reflect changes in characteristics along the way from our capital places at one end to our fun places at the other.

COMFORTABLE + SAFE

Golden Mile streets are prioritised for public transport and active modes, as well as being greener, safer, comfortable spaces for people to spend time in

3.7.1 Golden Mile Design Principles

Vision 2036 is supported by a series of design principles that provide direction for the design of the Golden Mile Project. These principles are as follows:

- Transitioning
 - Recognise that the carrying capacity of public transport on Golden Mile will have a limit if the system is to enable a good customer experience and retain amenity space for pedestrians within the public realm
 - Plan for the ultimate Wellington central city public transport system being on two routes for efficiency and reliability – the Golden Mile and potentially Jervois Quay/Taranaki Street south, and
 - Ensure that provision for alternative public transport routes to supplement the Golden Mile route capacity occurs well in advance of that limit being reached.
- Vibrant and prosperous
 - Reflect the Golden Mile’s unique local character and cultural landscape as the original harbour shoreline
 - Provide for linear continuity and attractive spaces where people can ‘dwell’ comfortably.
 - Prioritise public transport, walking and cycling access over private vehicles, and
 - Recognise the need for the strategic location of loading and servicing facilities to assist business prosperity.
- Inclusive and connected
 - Enable universal access, safe and comfortable movement for all people by considering the interplay of public transport, active modes and pedestrian space
 - Design for good public transport customer experience in place-specific street-based stops and interchanges, and

- Connect people by the street network and lanes both along and across the Golden Mile and to destination or anchor places (such as the waterfront, The Terrace, Civic Square, Te Papa, and parks).
- Greener
 - Deploy clean and green quiet running vehicles to the Golden Mile
 - Incorporate stormwater design into the street space greening in a format that is appropriate to a premium city place and which reflects climate change influences, and
 - Enhance green infrastructure including trees, active mode facilities (cycle storage, e-bike charging), green ‘pocket’ parks and water sensitive urban design suited to conditions.
- Resilient
 - Enable emergency vehicles to access all areas of the Golden Mile in emergencies
 - Provide for events / incidents that close lanes on the Golden Mile to maintain public transport services, and
 - Recognise sea level rise and flooding, ground shaking and liquefaction risks in design.

3.8 Defining the Problems: The Problem Statements

Following development of Vision 2036, and based on investment logic mapping (ILM) processes, three problem statements for the development of the SSBC were identified. Each problem statement and their associated weighting is set out in Table 13.

Table 13: Golden Mile Problem Statements²⁹

Problem Statements	Weighting
Problem 1 Slow and unpredictable bus travel times reduce the attractiveness of travel by bus	50%
Problem 2 Inadequate provision for pedestrians along and across the Golden Mile reduces convenience of walking	30%
Problem 3 Street layout limits the attractiveness of the Golden Mile as a place in which to spend time and move through	20%

²⁹ Cycling was not specifically identified as a primary problem to be addressed. This was due to the comparatively low number of cyclists that use the corridor and because the full extent of the Golden Mile was not identified in Wellington City Council’s Strategic Cycle Corridor (i.e. only Courtenay Place and Willis Street are identified). However, cyclists were considered to be a key user of the Golden Mile and it was recognised that their requirements needed to be considered during option development

The detailed evidence base, presenting the cause, effect and consequence of each of the problem statements is provided in the Strategic Case. The full ILM from the Strategic Case is reproduced in Section 3.10 below.

The section below provides a high-level overview of the evidence supporting each of the problem statements.

3.8.1 Problem Statement 1

Table 14 provides a high-level overview of the key causes, effects and consequences for development of Problem Statement 1, which is as follows: *Slow and unpredictable bus travel times reduce the attractiveness of travel by bus.*

Table 14: Problem Statement 1 - Key Causes, Effects and Consequences

Slow and unpredictable bus travel times reduce the attractiveness of travel by bus		
Causes	Effects	Consequences
The location of bus stops and general closeness of stop spacing	<ul style="list-style-type: none"> Buses are required to decelerate and accelerate frequently to attend bus stops, and Inefficient boarding and alighting movements (with problems exacerbated by high passenger demand at bus stops). 	<ul style="list-style-type: none"> Buses require longer time to accommodate passenger movements (i.e. 'dwell time'), and Customers waiting at bus stops hinder pedestrian through movements.
The location and extent of bus stops constrains the number of buses that may attend a stop	<ul style="list-style-type: none"> The number of buses attending a stop exceeds the available capacity, which forces buses to queue. 	<ul style="list-style-type: none"> Limited stop throughput by buses restricts boarding an alighting, resulting in reliability impacts and delay, and Queuing buses obstruct the streetscape and detract from urban amenity.
There are a large number of signalised intersections and pedestrian operated signals in close proximity to bus stops along the Golden Mile	<ul style="list-style-type: none"> Buses need to stop frequently at controlled crossings along the Golden Mile, and The need to interact between stops and signal controls constrains the throughput of buses. 	<ul style="list-style-type: none"> Buses 'platoon' - where multiple buses arrive at a bus stop at the same time - resulting in bus stop capacity being exceeded, and Bus throughput is constrained, reducing the volume of buses that can move through the corridor.
General traffic shares the roadway with buses (and there is non-bus parking at critical locations along the Golden Mile)	<ul style="list-style-type: none"> Interactions between general traffic and buses impacts on bus operations, and Car / non bus parking creates "side friction" for buses, with parking / exiting vehicles obstructing buses. 	<ul style="list-style-type: none"> Buses are forced to slow or stop to accommodate parking maneuvers from PMVs, resulting in reductions to reliability and delay, and Reversing vehicle movements associated with angle car parks increases the risk of collision.

Summary of Evidence for Problem Statement 1

The ILM identified that 50 per cent of the overall problem was slow and unpredictable bus travel times reduces the attractiveness of travel by bus.

As set out in Table 14 above, the most significant influencing factors for this problem are:

- The location and number of bus stops
- Bus stop capacity
- The number, location and design of signal controlled intersections / signalised pedestrian crossings, and
- The interaction of general traffic with buses, including side friction created by on-street car parking manoeuvres.

The average speed of a bus traveling the Golden Mile at peak times is 10.1kph with some of the worst sections experiencing an average speed of around 5kph. For comparison purposes, on average an able-bodied person will walk at around 5kph.

Figure 11 shows how average bus speeds between bus stops vary along the route. The two segments with the slowest speeds are in the northbound direction:

- Lambton Quay North to the Wellington Station, and
- Manners / Cuba Street to Manners / Willis Street.

Average bus speeds are more consistent for the southbound direction.

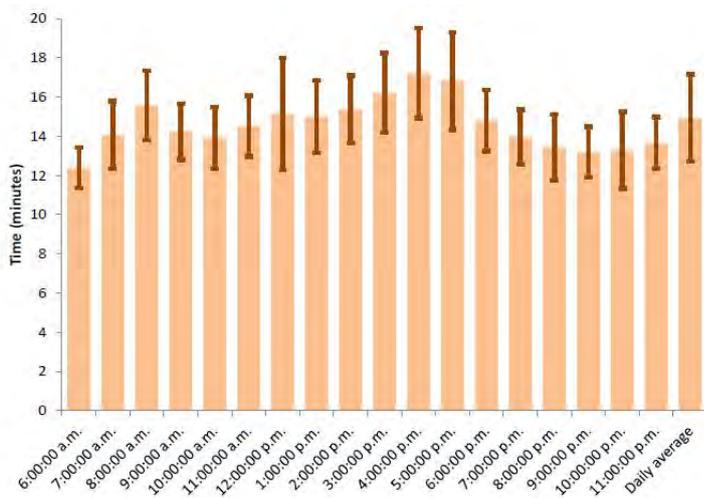
Figure 12 below shows that average northbound bus travel times along the Golden Mile vary throughout the day. For example, a bus trip can take 12 minutes in the morning peak (i.e. between 06:00 and 07:00), but 17 minutes in the evening peak hour. This same journey would take approximately 30 minutes for an able-bodied person on foot.

Figure 12 also shows the variability of travel times at different times of the day. It shows that the 17 minute average northbound travel time in the evening peak can take between 15 and 19 minutes.

Figure 11: Average Travel Time Between Stops (Km/h)



Figure 12: Northbound Travel times on Golden Mile by Time of Day (average and standard deviation)



Average travel times for the southbound direction are 13.5 minutes but demonstrate a similar pattern. In the southbound direction, the longest average travel times are also in the evening peak hour.

Variability in travel time (or service reliability) is arguably a more significant factor than journey time for public transport operations, as high variability in journey time impacts both the ability of customers to effectively plan their journey, as well as impacting the efficiency by which bus services are scheduled³⁰.

There are many factors influencing bus travel times and reliability. The most influential factors are:

- Interactions with vehicles, including side friction associated with parking
- Bus stops, and
- Signal-controlled intersections and pedestrian crossings.

Preliminary analysis indicates that the additional time it takes buses to be driven along the Golden Mile, (relative to free flow) is approximately:

- 1 / 3 attributable to bus stop dwell time
- 1 / 3 attributable to signal controlled intersections, and
- 1 / 3 attributable to other factors such as interaction with other vehicles using the corridor.

Bus Stop Locations and Capacity

Factors influencing bus dwell times are listed in Table 15 below. The time a bus spends at each bus stop is influenced by the numbers of people as well as the proportion of people boarding and alighting. When there are similar numbers of people boarding and alighting at the same time, this contributes to congestion at bus doors and on the footway. Patronage increases that increase bus occupancy as well as the numbers of people boarding, and alighting will exacerbate delays and unreliability associated with dwell times.

³⁰ Unreliable services require more timetable 'fat' to be scheduled, requiring on-time vehicles to hold at timepoints to maintain timetables. This ultimately reduces the overall capacity of buses that may be scheduled, as the service profile must be artificially constrained to accommodate run time variability

Table 15: Factors Influencing Bus Dwell Times

Factor	Impact on Dwell Times	Current State
Passenger boarding and alighting volumes and proportions	The more people served, the longer it takes to serve them.	Very high numbers of boarding and alighting along the length of route, particularly on Lambton Quay.
Fare payment method	Some fare payment methods require more time to execute (e.g. cash) than others (e.g. Snapper).	Tag on / tag off fare payment method used for 82.5 per cent ³¹ of passengers and cash payment used for 7.5 per cent of passengers.
Vehicle type, size	<p>Passengers spend less time boarding and alighting when boarding is level or near-level.</p> <p>Multiple or wide doors that allow several people to board or alight simultaneously help to expedite passenger movement.</p>	<p>Tag on / tag off fare payment method currently requires boarders to use front door.</p> <p>Tag on / tag off fare payment delays alighting and can delay boarding when passengers alight via front door.</p> <p>Wide doors allow for card users to pay while cash payment is in progress.</p>
In-vehicle circulation (internal layout)	<p>Boarding and alighting occurs more slowly when there are people standing.</p> <p>The amount of space between people standing, as well as the aisle width, also influences how easily passengers circulate within the vehicle.</p> <p>The presence of a single stairwell on double decker significantly constrains the ability of passengers to board and alight simultaneously.</p>	<p>Most buses have standees present at peak times.</p> <p>Double decker buses increase in-vehicle circulation time.</p>

There is a large variation in dwell times along the corridor. This variation is linked to the number of passengers boarding and alighting at each stop. There is also a strong correlation with the balance between boarding and alighting numbers. Bus stops where there are similar numbers of passengers boarding and alighting at the *same time* experience greater delays when compared to those bus stops where passengers are mostly boarding *or* mostly alighting.

Stopping time is also affected by bus stop capacity (for buses) – that is, the maximum number of buses that can use a stop at any given time. Where the volume of arriving buses, exceeds the number of buses that may be accommodated by the stop (i.e. bus stop capacity), then buses will queue back and obstruct traffic lanes. As boarding and alighting may only be undertaken at bus stops, buses must wait until they have arrived at the bus stop before undertaking boarding and alighting, further exacerbating delays.

Where space is available for overtaking, buses may overtake a delay point (such as a double decker), however opportunities to do so are limited. Similarly, services may be

³¹ During peak periods a higher proportion of passengers use tag on / tag off fare payment (i.e. Snapper)

scheduled to only attend certain stops along a corridor (e.g. 'skip stopping'), however this can lead to legibility issues for customers. Skip stop operation is currently not used on the Golden Mile.

On some sections of the Golden Mile, it is common to see four or five buses stopping in a series. At these locations, buses that are ready to move off may be delayed while they wait for the bus or buses ahead to finish boarding or alighting. Bus stops where it is common to observe platoons of buses are at the Manners / Cuba Street, Manners / Willis Street and Grand Arcade bus stops in the northbound direction, and the Lambton Quay (at Hunter Street), Willis / Bank and Manners / Cuba Street bus stops in the southbound direction. The capacity of these bus stops constrains the ability to increase bus throughput along the Golden Mile corridor.

Initial analysis of the Golden Mile corridor shows that hourly bus throughput does not exceed the maximum capacity for the Manners and Willis Street bus stops (60 to 100 buses per hour). These stops have the smallest capacity along the route. Bus stop capacity, as well as traffic intersections are the two main factors limiting the ability for the Golden Mile to accommodate the forecast increase in bus patronage.

Each time a bus decelerates to stop and then accelerates to move off from a stop, adds time to the overall journey. Consequently, the closer the bus stop spacing (and greater the number of stops), the more time is added to a bus journey along the Golden Mile.

This issue is exacerbated when bus stops are located close to signal-controlled intersections, as buses may move off from a stop only to then be stopped by a red traffic signal. Figure 13 shows six buses queued on Manners Street at a red traffic signal. Buses need to stop again before entering the intersection if there are passengers that wish to board. Drivers of the fourth, fifth and sixth buses are required to stop at the head of the stop, regardless of the traffic signals, to ensure that passengers do not miss their bus.

Figure 13: Six Buses Queued on Manners Street Northbound Bus Only approach to Willis Street



International best practice indicates a minimum bus stop spacing of 500m.

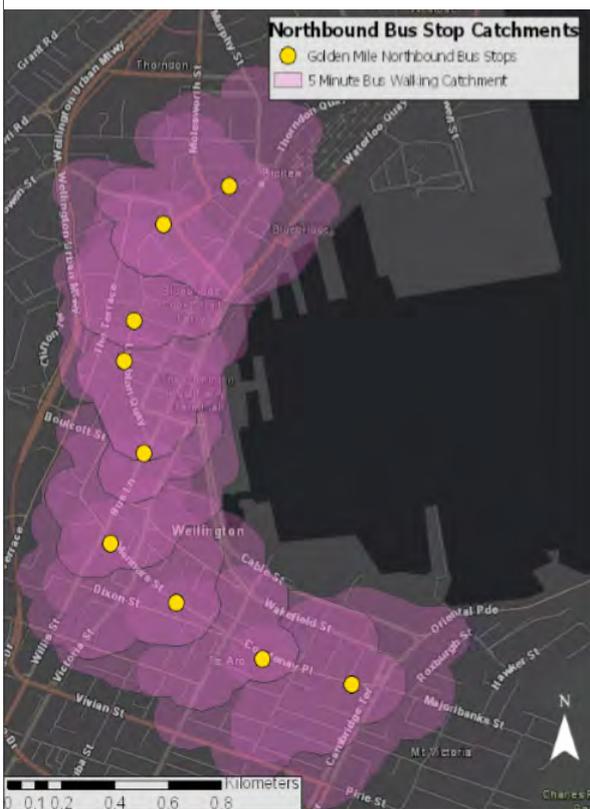
Therefore, for the 2.3km long Golden Mile, international best practice would suggest five stops for each direction. However, as set out in Figure 14, there are nine northbound stops and eight southbound stops. These stops are generally spaced between 250m to 300m apart, and can be walked by an able-bodied person in about three to four minutes.

Figure 14: Bus Stop Spacing Along the Golden Mile



Figure 15 shows the five-minute walking catchments for the existing northbound bus stops. It shows the extent of overlap in the catchments for each bus stop. The short bus stop spacing and overlap in bus stop catchments increases choice for passengers. It also spreads passengers waiting to board along the route rather than concentrating them at fewer stops. The short bus stop spacing increases the number of times buses are required to accelerate and decelerate and this increases bus travel times.

Figure 15: Minute Walking Catchments Northbound Bus Stops



The short bus stop spacing increases choice for passengers. It also spreads passengers waiting to board along the route rather than concentrating them at fewer stops. The short bus stop spacing increases the number of times buses are required to accelerate and decelerate and this increases bus travel times.

The optimum bus stop spacing will balance:

- Bus speeds
- Walking time to stops
- Dwell times
- Bus stop capacity (for buses)
- Space / capacity at bus boarding areas, and
- Dwell times.

Signal-controlled Intersections and Pedestrian Crossing Points

Traffic control signals are used to allow people to make conflicting movements at conflict points on the Golden Mile. There are six signal-controlled *pedestrian* crossings along the Golden Mile, and 17 signal-controlled *intersections* (which are spaced at 125m on average).

These intersections control traffic to allow:

- Pedestrians to cross the road safely, and
- Other road users to safely turn right across opposing traffic movements.

Signal-controlled intersections (see an example in Figure 16) however increase bus travel times by:

- Causing buses to decelerate and accelerate to and from a red traffic signal, and
- Causing buses to wait at a red signal whilst conflicting traffic movements occur.

The more movements that occur at a signal-controlled conflict point, the less “green time” available and greater delay for each movement. This is why signal-controlled pedestrian crossings, where there are only two conflicting movements (along the road or across the road), tend to create less delay than signal-controlled intersections with multiple traffic movements as well as separate pedestrian phases.

Figure 16: Bus Stopped at Plimmer Steps / Grey Street Signal-controlled Crossing



Long cycle times are more efficient for vehicular throughput, but can increase platooning for buses which creates problems for downstream bus stops. The expected increase in pedestrian movements within the central city means that it will be important to reduce cycle times to avoid footway overcrowding at signal controlled crossing points.

Traffic signal control systems also tend to be established to optimise the movement of vehicles and are not always calibrated to optimise the movement of people through an intersection. For example, the traffic control system is not able to distinguish between a turning vehicle carrying two people and a bus with 50 people on board.

On any journey a bus may be held at a red light at several intersections with the stopped time at red lights adding to the overall travel time. The intersections that create the most average delay for buses also provide the lowest proportion of the cycle time for bus movements. These are:

- Lambton / Bowen / Whitmore Northbound - average delay 47.9 seconds
- Brandon / Lambton Quay Northbound - average delay 35.1 seconds
- Willis/Lambton Quay / Customhouse Quay Northbound - average delay 25.5 seconds
- Manners / Willis / Boulcott Northbound - average delay 43.5 seconds
- Manners / Courtenay / Taranaki Northbound - average delay 24.2 seconds, and
- Manners / Courtenay / Taranaki Southbound - average delay 24.2 seconds.

The proximity of signal-controlled intersections to adjacent bus stops on the Golden Mile limits the stop capacity. This occurs because bus arrivals and departures are metered by traffic signals.

Merging, Weaving and Side Friction

Interaction with other road users contributes to long travel times and poor reliability for buses on the Golden Mile. The additional time and variability are caused by:

- Buses waiting to pass vehicles manoeuvring into car-parks or loading bays that are adjacent to the bus or traffic lane
- Buses waiting to manoeuvre around parked cars that extend into an adjacent bus or traffic lane, and

Buses waiting to weave or merge with adjacent traffic flows.

Delays associated with kerbside facilities are caused by their location and design. The red truck in Figure 17 is illegally parked opposite the Lambton Quay / Hunter Street Southbound bus stop. It shows northbound buses forced to cross the centre line. When southbound buses are waiting at the stop, northbound buses would be delayed.

Delays associated with weaving or merging are created when buses must change their position in the road carriageway to allow provision for other traffic at signal-controlled intersections. For example, and as set out in Figure 18, on the Courtenay Place northbound approach to Taranaki Street, buses must weave from a near side bus lane to a middle lane approach to the intersection. Queues from the intersection often impede this manoeuvre resulting in an average 10 to 15 second delay for each bus.

Figure 17: Potential Delay to Buses resulting from Illegal Parking / Loading



Figure 18: Weaving on the Northbound Approach to Taranaki Street



Similarly, and as set out in Figure 19 below, buses weaving from the near side bus lane on Lambton Quay’s northbound approach to the Bowen Street intersection are delayed on average by 20 to 30 seconds each.

Figure 19: Weaving on the Northbound Approach to the Bowen Street Intersection



Implications of the Evidence for Problem Statement 1

A slow, unreliable bus service is not appealing for bus users and will not help to make travel by bus an attractive option. Academic research³² consistently concludes that service reliability is one of the most important factors influencing the attractiveness of travel by bus.

A study for the UK Transport and Roads Research Laboratory during the 1980s found that the basic attributes of public transport services can be grouped under six general headings, with the most commonly observed relative ranking, in order of decreasing importance, being:

1. Safety (from traffic accidents and personal assault)
2. Reliability
3. Door-to-door speed
4. Cheapness
5. Convenience, and
6. Comfort.

Subsequent research internationally has arrived at similar conclusions and noted that the relative importance to each of these attributes is influenced by:

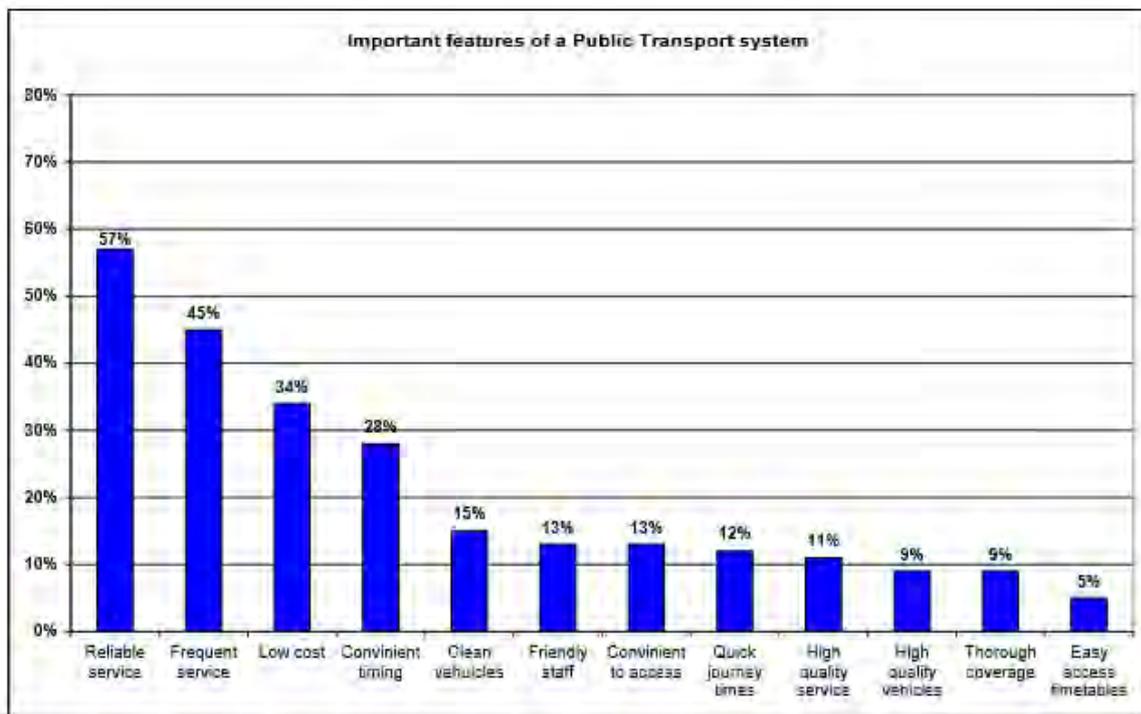
- The availability and quality of the bus services users have become used to
- Perceptions of the performance of the bus services with which respondents are familiar, and
- Respondents' access to reasonable bus services.

Regular bus users will generally have access to reasonable bus services. Infrequent or non-bus users are likely to consider that the bus services available to them do not meet their needs. These respondents are likely to assign greater importance to attributes relating to the availability of services (e.g. walking distances, service frequencies) than to the quality of services (e.g. reliability).

For Wellington, which is relatively well served by buses, this means that it is reasonable to assume service reliability will be of paramount importance for bus users. This is supported by Figure 20 which shows that service reliability is consistently highlighted as an important feature of public transport services.

³² See: NZ Transport Agency Research Report 527, Improving Bus Service Reliability, Sept 2013 - <https://www.nzta.govt.nz/assets/resources/research/reports/527/docs/527.pdf>

Figure 20: User Views on Important Features of a Good Public Transport System



Source: Annual public transport satisfaction monitor (GWRC 2008)

Figure 20 also shows that service frequency is highly valued by Wellingtonians. Increasing service frequency along the Golden Mile will require the ability to accommodate a higher hourly bus throughput at peak hours. Bus throughput is currently constrained by bus stop capacity on both Willis and Manners Streets (due to the inability to pass), the proximity to and priority at the traffic signals, passenger demands and dwell times. GWRC officers expect that within the next five years, peak hour bus throughput will increase by almost 30 per cent. Constraints associated with Willis and Manners Street mean that this increase will be expected to result in an increase in (un)reliability. This not only limits the ability to increase the attractiveness of bus services but is impacting on the ability to grow the city in a way that is aligned with LGWM’s Vision.

Research undertaken by Waka Kotahi to inform the development of the Monetised Benefits and Costs Manual (MCBM)³³ has quantified the impact of (un)reliability on patronage. This research concluded that “the demand effect of a one-minute change in average bus lateness would be equivalent to those of a four to five minute change in in-vehicle-travel time, which in turn could be expected to result in a patronage change of around 5 to 10 per cent (if there is available capacity).” This means that travel time reliability is five times more valuable to customers than travel time.

3.8.2 Problem Statement 2

Table 16 provides a high-level overview of the key causes, effects and consequences for Problem Statement 2, which is as follows: *Inadequate provision for pedestrians along and across the Golden Mile reduces convenience of walking.*

³³ See: Transfund NZ research report 248, Review of passenger transport demand elasticities, Ian Wallis 2004

Table 16: Problem Statement 2 - Key Causes, Effects and Consequences

Inadequate provision for pedestrians along and across the Golden Mile reduces the convenience of walking		
Causes	Effects	Consequences
The number of people wanting to move along the footway exceeds the available space. City growth will place footway capacity under further pressure in the future	<ul style="list-style-type: none"> • Overcrowding can make walking now uncomfortable / inconvenient and sometimes unsafe, which is likely to get worse in the future with growth, and • Overcrowded footways force people to walk on the road carriageway. 	<ul style="list-style-type: none"> • Pedestrians' journeys take longer to complete, and will take longer in the future • The number of pedestrian crashes will increase, and • Overcrowding reduces access for users.
Large amount of street furniture and advertising signs located in the footway	<ul style="list-style-type: none"> • "Reduces" footway width and obstructs pedestrian movement. 	<ul style="list-style-type: none"> • Contributes to a poor LoS, particularly on Lambton Quay and Willis Street.
Large numbers of people waiting at bus stops	<ul style="list-style-type: none"> • "Reduces" footway width and obstructs pedestrian movement. 	<ul style="list-style-type: none"> • Contributes to a poor LoS, particularly on Lambton Quay and Willis Street.
Long wait times at signalised intersections	<ul style="list-style-type: none"> • Increases the likelihood that pedestrians will cross on a red at the crossing point • Encourages people to cross at uncontrolled / unprotected crossing points, and • Creates footway overcrowding at intersection signals. 	<ul style="list-style-type: none"> • Increases the risk of pedestrian crashes.

Summary of Evidence for Problem Statement 2

This section provides evidence for Problem Statement 2 (Inadequate provision for pedestrians along and across the Golden Mile reduces convenience of walking). The ILM assigned a 30 per cent weighting to this problem statement.

Providing adequate pedestrian space is essential for realising vibrant, safe, liveable cities. In central city environments, walking is a key travel mode, whether it constitutes an entire journey or is the beginning and end of journeys by bike, public transport, or private vehicle. Walking is the most space efficient travel mode which makes it important for high density central city areas such as the Golden Mile.

Insufficient Space for Pedestrians

The Golden Mile is a busy place for pedestrians. Lambton Quay is reputed to be one of the country's busiest streets for pedestrians. Space on the footway is taken up by street furniture such as seats, signs and rubbish bins. This limits the space which is available for pedestrians. In the evening peak hour, the passengers waiting at bus stops also limits the space available for pedestrians walking along the street.

The lack of space and high demands leads to the following:

- Travel time reduction with the associated reduction in productivity and agglomeration benefits
- Safety concerns associated with crowding and people walking on the carriageway, and
- Access issues for people with reduced mobility or those accompanying children caused by crowding.

Pedestrian counts across the central city undertaken by LGWM in 2016 found that the areas with the highest pedestrian volumes are the Golden Mile and the Waterfront. The numbers of pedestrians are different in each section of the Golden Mile. Footway widths also vary along the route. Where the number of people wanting to move along the footway exceeds the available space, walking becomes uncomfortable and sometimes unsafe.

Table 17 shows the footway width (distance between kerb and property boundary) and the approximate daily footfall. Due to the adjacent land use and numbers of intersecting side roads, the levels of pedestrians may not be distributed evenly between each side of the street.

Not all the width between the kerb and buildings is available for walking with street furniture, bus stops, vegetation, sandwich boards and other items constraining the available width. Therefore, in reality, the widths listed below are the best case scenario and generally the available footway width is significantly less.

Table 17: Footway Width and Approximate Daily Footfall

Street	Footway Width on Each Side	Approximate Daily Footfall
Lambton Quay ³⁴	2 - 7m	29,000
Willis Street ³⁵	4 – 5m	31,500
Manners Street ³⁶	3 – 5m	13,000
Courtenay Place ³⁷	>3m	13,000

The times when footways are busiest are:

- The morning and evening peak hours when people are travelling to and from work, and
- Lunchtimes, when central city workers leave their workplace to buy lunch or visit the shops.

The demands in the morning peak hour reach 5,000³⁸ pedestrians per hour (or about 80 pedestrians per minute) on the west side of Lambton Quay between Waring Taylor and Johnston Streets. The Pedestrian Planning and Design Guide³⁹ recommends a clear footpath width of 2.4m or wider for a demand of 80 pedestrians per minute.

The growth of the city and the prospect of an additional 5,000 people arriving at the Wellington Station in the morning peak hour means that footways on Lambton Quay and in other central city streets will come under further pressure and increasingly be unable to accommodate the demand. As well as making it uncomfortable and inconvenient to walk along the Golden Mile, this could also increase the number of crashes involving pedestrians.

Parts of the Golden Mile are Inconvenient (Provide a Poor LoS) for Pedestrians

There are different ways to measure pedestrian LoS:

- **Midblock pedestrian LoS:** a measure of pedestrian crowding and is a function of the available pedestrian width and the pedestrian flow, and
- **Pedestrian Crossing LoS:** a measure of pedestrian delay at formal crossing points which can be a function of pedestrian green time at signal-controlled crossings or vehicle headways for uncontrolled crossings.

Midblock Pedestrian Level of Service

Figure 21 shows the midblock pedestrian LoS calculated by LGWM⁴⁰. It shows that midblock pedestrian LoS is poor on Willis Street and Lambton Quay. Both streets have the greatest pedestrian volumes and serve land with the highest employment density and

³⁵ Narrowest sections adjacent to loading zones

³⁶ Narrowest section on north side west of Taranaki Street

³⁷ Narrowest section at Courtenay Central bus stop

³⁸ Wellington City Council 2019 Monitoring Surveys

³⁹ See: <https://www.nzta.govt.nz/assets/resources/pedestrian-planning-guide/docs/chapter-14.pdf>

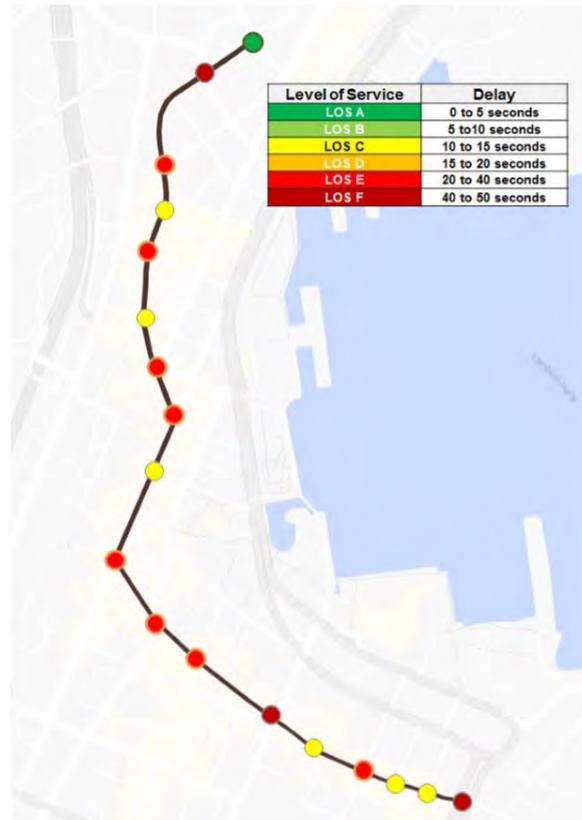
⁴⁰ Refer Appendix B - Golden Mile Problem Definition and Case for Change, LGWM, 2019

concentration of retail. This figure also shows that there is good midblock pedestrian LoS on Manners Street and Courtenay Place. Figure 22 shows that the footway widths provided on Lambton Quay and Willis Street are insufficient for the demand.

Figure 21: Midblock Pedestrian LoS



Figure 22: Pedestrian Crossing (Controlled) LoS



Street furniture, much of which is provided to enhance the amenity of the Golden Mile, can also contribute to pedestrian overcrowding. In places, poorly located seating, rubbish bins, signs and planting reduces the effective width of the footway so the full width is not useable. Moveable advertising (“sandwich” boards / signs) also reduces the effective width available for pedestrians.

Interaction between Bus Passengers and Pedestrians

As well as reducing efficiency and slowing bus boarding and alighting, the interaction between pedestrians and bus passengers also impacts on the midblock pedestrian LoS. The level of service may be reduced because footway space is taken up with street furniture associated with bus stops or is taken up by people waiting to board a bus. Increasing bus patronage will further exacerbate this issue in the future.

Pedestrian Crossing LoS

Figure 22 above shows the pedestrian crossing LoS at signal-controlled crossings of the Golden Mile. Only the zebra crossing achieves a LoS of A. This figure shows that pedestrian crossings incorporated within signal-controlled intersections provide a pedestrian LoS of E or F. At intersections, where there are many conflicting movements to provide for, a lower proportion of the cycle time is allocated for pedestrians. Midblock signal-controlled crossings cater only to through movements on the carriageway and

pedestrian movements across the road. A greater proportion of the cycle time is allocated for pedestrians.

Figure 23 shows a crowd of pedestrians crossing the Boulcott Street arm of the Manners Street intersection. A “barn dance” pedestrian crossing is provided which includes a stage in which all motorised traffic is stopped at the same time to allow pedestrians to cross. Footways at this intersection often become impassable as large numbers of pedestrians wait to cross. Long cycle times necessary to accommodate multiple road users contributes to footway overcrowding.

Figure 23: Overcrowding at Boulcott Street



Long waiting times at crossing points increases the likelihood that pedestrians will cross when a red is signalled at the crossing point. This can increase the risk of crashes involving pedestrians.

On narrow sections of the Golden Mile, such as Willis Street or sections that have central refuges, it is common for pedestrians to cross at uncontrolled locations. This is convenient for able-bodied pedestrians but can be dangerous when forward visibility to or from pedestrians is impaired.

Pedestrian Safety

Figure 24 and Figure 25⁴¹, shows the crash history for the Golden Mile. The figures show that while most crashes over the last nine years only involved motor vehicles, most of the crashes in which someone was killed or seriously injured involved pedestrians and motor vehicles. This is due to the high numbers of pedestrians that use the Golden Mile and the vulnerability of pedestrians. Cyclists are similarly vulnerable. While only 28 percent of recorded crashes between 2009 to 2018 involve a pedestrian or cyclist, they account for 19 out of 20 (or 95 per cent) of all DSIs on the Golden Mile.

Accordingly, the data suggests that to make the Golden Mile a safer place, there is a need to first concentrate on pedestrians, followed by people on bikes as they account for most of the serious and fatal crashes.

⁴¹ See Appendix B from: [Microsoft Word - Golden Mile Strategic Case Refresh - FINAL June 2020.docx \(amazonaws.com\)](#)

Figure 24: Reported Crashes on the Golden Mile 2009 to 2018

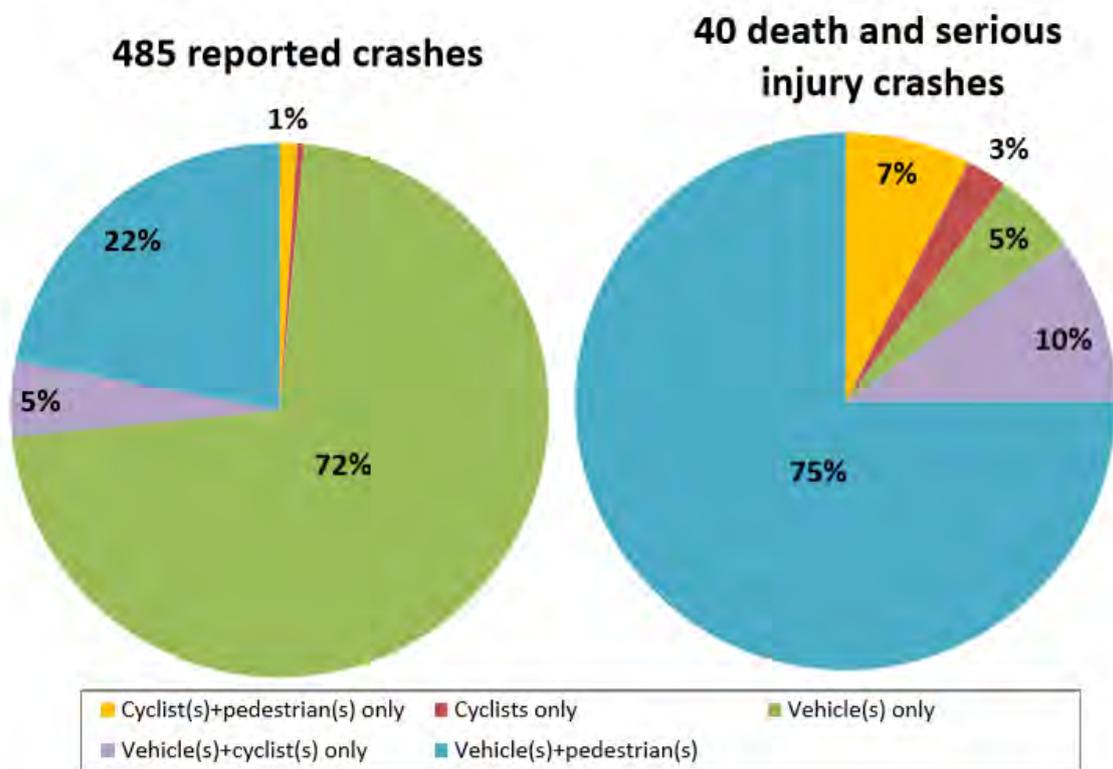


Figure 25: Reported Number Crashes involving Pedestrians and a Vehicle (2000 to 2018)

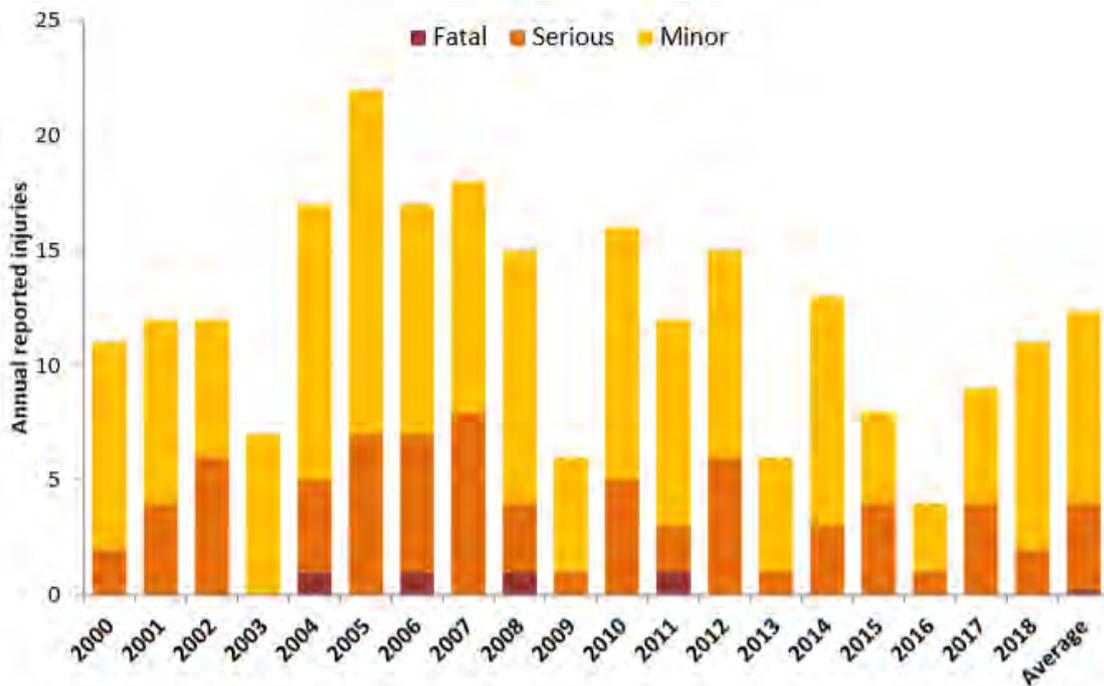
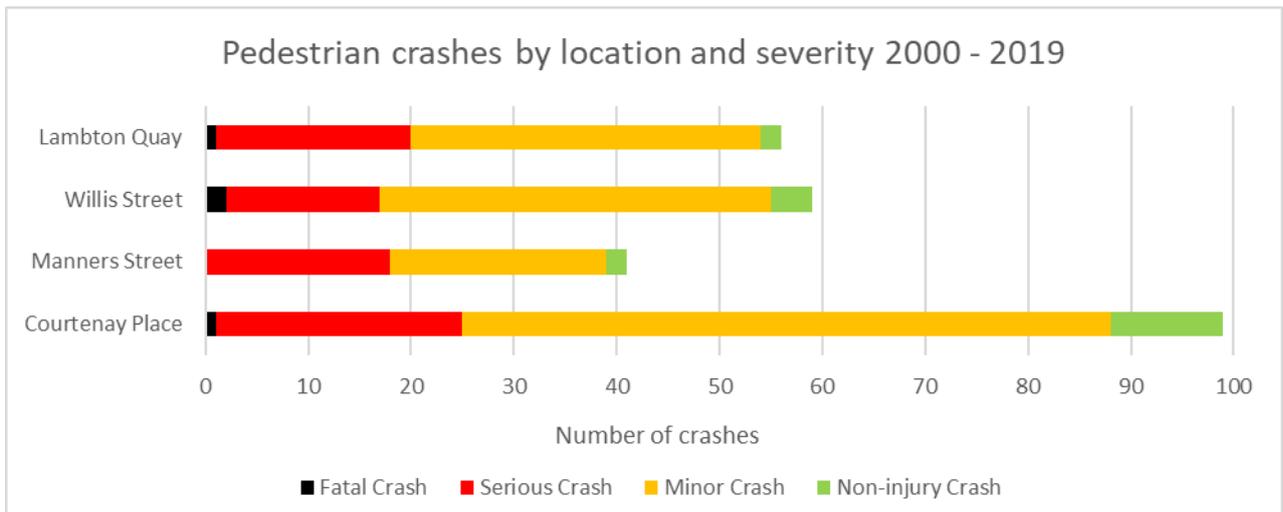


Figure 26 shows which streets pedestrian crashes have occurred in over the last 20 years. It shows significantly more pedestrian crashes occur on Courtenay Place. Further interrogation of the data shows that 54 per cent of crashes on Courtenay Place occurred between 6:00pm and 6:00am at night. Just under 20 per cent occurred between 12:00am and 2:00am.

If the late night and early morning crashes on Courtenay Place are disregarded, then Courtenay Place has a similar number of crashes to the other streets on the Golden Mile.

Figure 26: Pedestrian Crashes by Location and Severity 2000 - 2019



Implications of the Evidence for Problem Statement 2

Pedestrian accessibility is a key element of any retail activity area, with pedestrian footfall a major driver of retail activity.

Pedestrian movements account for the most significant volume of people movements along the Golden Mile and maintaining and improving pedestrian access is crucial to the character and activation of the corridor.

Inadequate provision for pedestrians in a major urban precinct such as the Golden Mile serves to discourage pedestrian activity, which in turn:

- Results in a reduction in productivity and agglomeration benefits associated with the precinct
- Decreases the accessibility of the area, in particular for those people who have reduced mobility, and
- Increases risks to personal safety associated with crowding and the subsequent overspilling of people into the active carriageway.

3.8.3 Problem Statement 3

Table 18 provides a high-level overview of the key causes, effects and consequences of Problem Statement 3, which is as follows: *Street layout limits the attractiveness of the Golden Mile as a place in which to spend time and move through.*

Table 18: Problem Statement 3 - Key Causes, Effects and Consequences

Street layout limits the attractiveness of the Golden Mile as a place in which to spend time and move through		
Causes	Effects	Consequences
Poor public space amenity in some locations	<ul style="list-style-type: none"> Poor amenity discourages spending time and movement, and such spaces often create opportunities for anti-social behavior (including crime). 	<ul style="list-style-type: none"> People don't spend time in poor amenity areas Pedestrians can feel frustration and anxiety, and Pedestrians can feel unsafe.
Few public spaces within which to comfortably spend time	<ul style="list-style-type: none"> People have limited places to pause and comfortably spend time in. 	<ul style="list-style-type: none"> People spend less time playing, living and working on the Golden Mile.
There is a lack of pedestrian connection between the Golden Mile and surrounding precincts	<ul style="list-style-type: none"> Poor quality connections impact legibility and navigation beyond the Golden Mile. 	<ul style="list-style-type: none"> Discourages people from moving to and through the Golden Mile.

Summary of Evidence for Problem Statement 3

There have been several studies investigating the quality of the public realm in Wellington and along the Golden Mile.

In 2004, Gehl Architects completed a public realm assessment⁴². Some of Gehl’s key observations of the factors affecting the amenity of the Golden Mile were as follows (the bullet points in *italics* below are those considered directly relevant to this problem statement, whilst the others are relevant to Problem Statement 2):

- Pedestrian movements are not sufficiently prioritised compared with other traffic
- *Lack of a coherent design for walking routes along the Golden Mile affected wayfinding*
- Insufficient footway width on Lambton Quay
- Inadequate provision for disabled people
- Sandwich boards along the Golden Mile create visual and physical clutter
- Pedestrian waiting times at traffic lights are too long
- *There needs to be more places to rest in squares and along streets at reasonable intervals*
- *There needs to be a greater sense of pedestrian connection between Golden Mile and the waterfront with streets providing visual connections and increased pedestrian priority, and*
- *There needs to be a greater sense of pedestrian connection between Lambton Quay and the Parliamentary precinct.*

Many of the above suggestions (in italics) would help to improve the experience of people using the Golden Mile. A more recent⁴³ review of the street environment identified similar issues that were limiting the attractiveness of the Golden Mile as follows (the bullet points in *italics* below are those considered directly relevant to this problem statement):

- Insufficient space for pedestrians leads to overcrowding at busy times of the day
- Street clutter and footway reduces the useable space exacerbating overcrowding
- Bus stop waiting areas are overcrowded and uncomfortable
- *Poor quality connections to, from and across the Golden Mile impacts on legibility*
- *Few public spaces within which to comfortably dwell, and*
- *Poor amenity in public spaces that are provided.*

Each of the above factors reduces the attractiveness of the Golden Mile as a place within which to spend time and move through.

Feeling Unsafe

Crime or the fear of crime influences the feeling of safety. The Golden Mile has historically been a “hotspot” for crime, particularly in the evenings and on weekends.

⁴² See: <https://wellington.govt.nz/your-council/plans-policies-and-bylaws/urban-development/strategies-plans-and-policies/city-to-waterfront-study/gehl-report>

⁴³ Golden Mile Preliminary Analysis - Pedestrian Link + Place Qualities, FutureGroup, 2019

Feeling unsafe reduces the attractiveness of the Golden Mile as a place within which to spend time and move through.

In 2012, 5,753 reported crimes were on the Golden Mile, out of 16,627 across the city⁴⁴. Sexual assaults, fights, thefts and alcohol-fuelled disorder make up a large proportion of the incidents police attend in the central city between Parliament and the end of Courtenay Place.

The number of crimes and the times of day when they occur differ according to the section of the Golden Mile. The 2014 to 2017 NZ Crime Maps show that most assaults in the central city occur in the Courtenay Place area. In this area, there were around 1,050 over three years, most of which occurred between 2am and 5am. In comparison, there was only 280 assault crimes reported in the Lambton Quay area over the same period in the hours before midnight.

Personal safety can be affected by the local environment’s design. Where there are opportunities for concealment or poor sight lines (e.g. where people may be obscured by shrubs or other obstructions) this may contribute to people feeling unsafe. Other factors that influence feelings of safety include lack of passive surveillance, low levels of weekend and night time activity or drunk or otherwise chemically impaired people. Most of these factors apply to one or more parts of the Golden Mile at different times of the day.

Frustration and Anxiety

Pedestrian overcrowding and long waiting times at crossings may contribute to feelings of frustration and anxiety. The proximity of footways to large moving buses may also impact on the ambience of the Golden Mile and the ability for people to feel relaxed within it. These issues reduce the attractiveness of the Golden Mile as a place within which to spend time and move through.

The proximity of footways to large moving buses may also impact on the ambience of the Golden Mile and the ability for people to feel relaxed within it.

Lack of Dwelling Spaces

Dwelling spaces, where people may rest or socialise are few and far between on the Golden Mile. This may prevent some people from feeling relaxed within the Golden Mile. Most (80 per cent) of the open space in the city centre (except for the Waterfront) is provided within the streets themselves.

Lack of Wayfinding

In terms of wayfinding, the quality of connectivity between streets connecting to the Waterfront and The Terrace is variable.

The attractiveness of connections to and from the Golden Mile is also affected by the ease of crossing the road. In some locations, there are clear pedestrian crossing desire lines that are not catered for. This can be seen in Figure 27 below, which shows an example of an unofficial crossing point on Lambton Quay close to Panama Street. The figure also shows strategically placed street furniture which suggest attempts have been made to discourage crossing at this location. This is likely to be because a pedestrian crossing from west to east would not be seen by any vehicle passing a bus stationary in the stop.

⁴⁴ See: <http://www.stuff.co.nz/national/7530325/Crackdown-on-Wellingtons-Golden-Mile>

Figure 27: Unofficial Crossing Point



Improvement Opportunities

There are long standing aspirations to improve the connections between the Waterfront and the Golden Mile.⁴⁵

The Golden Mile generally follows the old harbour shoreline. Older buildings along the route and their format (e.g. triangular shapes where the street grid meets the curving harbour) and other cultural heritage sites present significant opportunities. The preliminary analysis of the place qualities identifies that these buildings could be better respected within the urban fabric. They represent an opportunity to enhance the feel of the Golden Mile.

Figure 28: Old Bank Building



The Old Bank building, at the intersection between Lambton Quay and Hunter Street (see Figure 28), is a good example. The lack of space surrounding the building has been identified as reflecting poorly on the significance of this historic area.

The Golden Mile is generally framed by continuous building frontages. The quality of these frontages is influential to the experience for people within the street. Gehl's 2004 report describes the condition along the Golden Mile as generally 'Attractive or Pleasant (on a 5-step scale of Attractive to Unattractive). However, the edges of Te Aro Park and along the south side of Courtenay Place (see Figure 29 below) were seen to be Unattractive or Dull which still holds true today.

⁴⁵ See the Central City Framework 2040 and Preliminary Place Movement Framework 2019

Figure 29: Example of Unattractive Built Edge near Te Aro Park



Careful investment in the public realm to enable movement outcomes can influence the response of private landowners to the street built edge. New public realm dwelling spaces should generally be developed only if there are built edges and ground level uses that have the potential to respond to the space (such as at the Bond Street cul-de-sac shown in Figure 30 below).

Figure 30: Potential for New Dwelling Space at the End of Bond Street



Implications of the Evidence for Problem Statement 3

In summary, key factors restricting the attractiveness of the Golden Mile as a place within which to spend time and move through include:

- Poor quality connections to, from and across the Golden Mile impacts on legibility
- Few public spaces within which to comfortably dwell, and
- Poor amenity in public spaces that are provided.

The above factors, combined with pedestrian overcrowding and long waiting times at crossings, may also contribute to feelings of frustration and anxiety. The proximity of footways to large moving buses may also impact on the ambience of the Golden Mile and the ability for people to feel relaxed within it.

The Golden Mile has also been historically a hotspot for crime, particularly in the evenings and on weekends on Courtenay Place.

3.9 Defining the Benefits: The Benefit Statements

The benefits (or outcomes) that are sought from responding to the three problem statements were identified as part of the ILM process. Ultimately, four benefit statements (and weightings) along with supporting key performance indicators (KPIs), were identified through the ILM process.

It is noted that the KPIs below were further developed during the SSBC, and have now been superseded by the measures proposed for the investment objectives (see Section 3.11 below) and in the Benefits Realisation Plan (see Section 8.5).

Benefit Statement 1: Faster, more reliable bus system (50 per cent)

This benefit was to be measured by the following KPIs:

- KPI 1: bus travel time reliability
- KPI 2: bus speeds
- KPI 3: system occupancy
- KPI 4: customer satisfaction

The key outcomes of Benefit Statement 1 respond to the fundamental problems currently faced by bus services utilising the Golden Mile. By making bus travel more reliable and faster along the Golden Mile will increase the attractiveness of the bus network for both Golden Mile and wider bus / public transport network users. It will also help to future proof the network for the future users of the bus network, with demand predicted to grow significantly over the next 30 years.

Benefit Statement 2: Improved pedestrian safety (20 per cent)

This benefit was to be measured by the following KPI:

- KPI 1: walking safety

Pedestrians (as well as bus users) are the majority users of the Golden Mile. They are also one of the most vulnerable of the users. As such, improving safety for pedestrians along the Golden Mile should lead to less pedestrian crashes, and will make the Golden Mile a more attractive place to live, work and play.

Benefit Statement 3: Improved pedestrian convenience (20 per cent)

This benefit was to be measured by the following KPIs:

- KPI 1: pedestrian flow
- KPI 2: LoS walking

Improving pedestrian LoS should improve comfort and convenience at hotspots and should enable greater volumes of pedestrians to access and travel along the Golden Mile. Improved waiting areas for bus passengers and reduced overcrowding at bus stops should also improve pedestrian LoS as well as improving comfort and convenience for those waiting at bus stops.

Benefit Statement 4: Increased amenity value (10 per cent)

This benefit was to be measured by the following KPI:

- KPI 1: amenity index

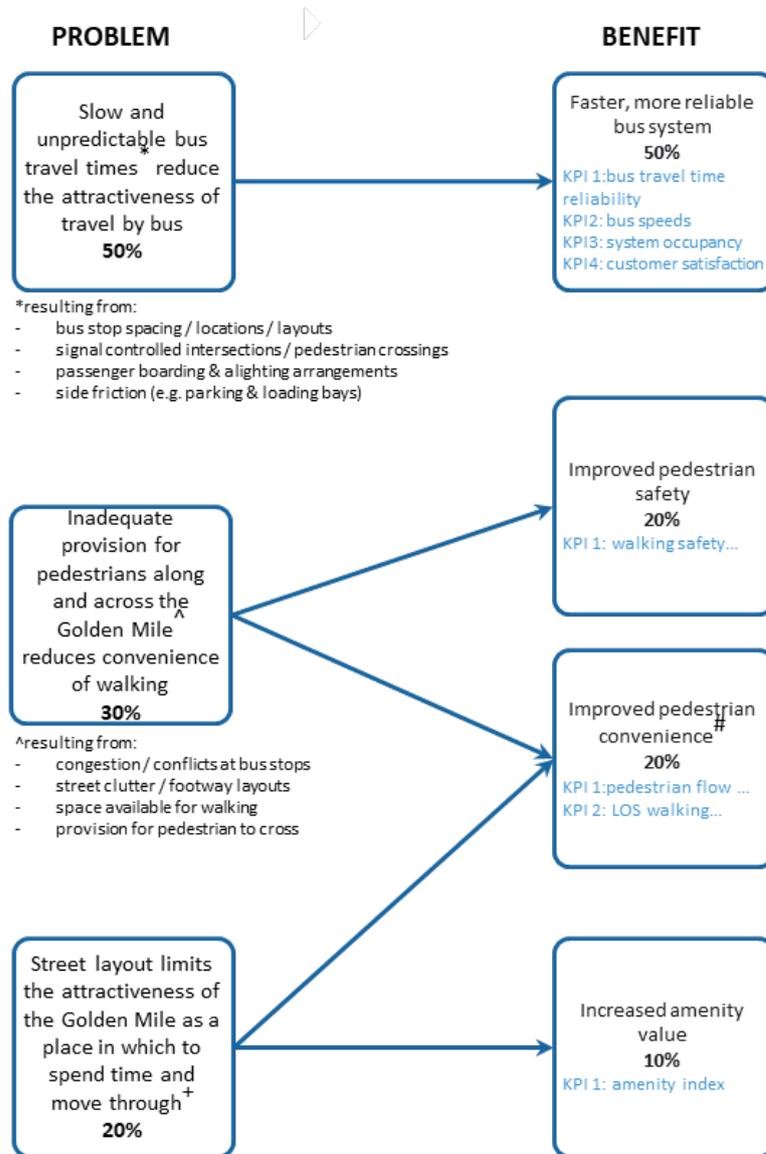
Investing in improve amenity should lead to place quality improvements along the Golden Mile. This in turn, will make the Golden Mile a more attractive place to access and spend time in.

3.10 Summary of Investment Logic for the Golden Mile

Figure 31 summarises the logic for investment in the Golden Mile. It highlights the problems that need to be addressed and the benefits sought from any investment.

Figure 31: Linking the Problems and the Benefits

Moving More People, Safely and More Reliably using Fewer Vehicles *Accommodating the Growth of Wellington*



+ people experience amenity when spending time within and moving through a place whether that be eating their lunch, socializing, waiting for a bus or walking between shops or appointments.

pedestrian convenience refers to the ease with which people may cross the road, the ability to walk along the Golden Mile unimpeded by street clutter and to the capacity of the Golden Mile to accommodate the pedestrian demand.

3.11 Defining the Investment Objectives

Through the ILM process, investment objectives and supporting weightings were identified. The weightings percentage provide an indication of the relative importance of each investment objective.

The investment objectives identified through the ILM process were as follows:

1. Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (40 per cent)
2. Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (15 per cent)
3. Reduce the number of crashes within the Golden Mile that result in pedestrian injury (15 per cent)
4. Increase the capacity for pedestrians to move through the corridor by improving walking LOS along and across Golden Mile (15 per cent), and
5. Improve the place quality of the Golden Mile (15 percent).

At the time of approval of the Strategic Case, it was noted that making the above investment objectives SMART⁴⁶ would occur as the SSBC was further developed. The updated (and now SMART) Golden Mile Investment Objectives are set out in Table 19 below (it is noted that there have been no changes to the weightings).

The Strategic Case also advised that the investment objectives (as identified in the Strategic Case) were to be used to evaluate the appropriateness of alternative improvement options as discussed further in the Economic Case below.⁴⁷

⁴⁶ SMART = Specific, Measurable, Attributable, Realistic and Timely

⁴⁷ In addition, the Strategic Case identified the following “key considerations” for comparing alternative improvement options:

- Ability to provide safe and convenient journeys by bike
- Ability to demonstrate tangible improvements within the 2018-21 / 2021-24 period
- Impact of implementation on businesses in the Golden Mile, and
- Positive economic impact on businesses in the Golden Mile.

Table 19: SMART Golden Mile Investment Objectives

SMART Investment Objectives (and weightings)	Key Performance Indicator(s)	Baseline(s)	Target	Time	Source
Improve bus travel times and travel time reliability along the Golden Mile (40%)	KPI 1: Bus travel time reliability Variation between scheduled and actual arrival times	KPI 1: NB = 5 minutes SB = 4 minutes 06/2020	KP 1: NB and SB 60 – 62 seconds	06/2023	Metlink
	KPI 2: Bus travel time Route 1 Golden Mile start to finish travel time, PM Peak	KPI 2: NB = 14 minutes SB = 13 minutes	KPI 2: NB = 12 minutes SB = 11 minutes		
Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (15%)	KPI 1: Customer satisfaction surveys Enhanced Annual GWRC customer surveys for the Golden Mile	TBC ⁴⁸	TBC	TBC	Metlink
Reduce the number of crashes within the Golden Mile that result in pedestrian injury (15%)	KPI 1: No. of DSI's Number of pedestrians involved in DSI	2.8 avg p.a. ped DSI 5 year average ending 12/2019	2.6 avg p.a. ped DSI	12/2036	CAS Analysis
Increase the capacity for pedestrians to move through the corridor by improving walking LOS along and across Golden Mile (15%)	KPI 1: Pedestrian Delay at Key Intersections Pedestrian time lost due to intersection delay	Varies ⁴⁹	Varies	Varies	Transport Monitoring Surveys
Improve the place quality of the Golden Mile (15%).	KPI 1: LGWM Amenity Index Amenity Index ⁵⁰	Varies: Poor to Average 06/2019	Average or better >3.5 (out of 5)	12/2036	LGWM PBC

⁴⁸Current Metlink customer satisfaction surveys are not specifically focused on the Golden Mile and generally report very high levels of satisfaction. An initial survey conducted prior to implementation will be required to form a baseline for this KPI and will subsequently inform target and time.

⁴⁹Varies by section – refer to Measure 4 tables in Benefits Realisation Plan

⁵⁰Refer to LGWM PBC

Alignment of Golden Mile Investment Objectives with LGWM Programme Objectives

As set out in Table 20, the Golden Mile investment objectives are aligned with the LGWM’s updated programme objectives.

Table 20: Golden Mile Investment Objectives Alignment with LGWM’s Objectives

Golden Mile Investment Objectives	LGWM Programme Objectives				
	Liveability ⁵¹ (20%)	Access ⁵² (15%)	Carbon Emissions and Mode Shift ⁵³ (40%)	Safety ⁵⁴ (15%)	Resilience ⁵⁵ (10%)
Improve bus travel times and travel time reliability along the Golden Mile (40%)		✓	✓		✓
Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile (15%)		✓			✓
Reduce the number of crashes within the Golden Mile that result in pedestrian injury (15%)	✓	✓	✓		✓
Increase the capacity for pedestrians to move through the corridor by improving walking LOS along and across Golden Mile (15%)	✓			✓	
Improve the place quality of the Golden Mile (15%).	✓			✓	

3.12 Summary of Problems, Benefits and Investment Objectives

Figure 32 sets out how the problems, benefits and investment objectives are linked.

⁵¹ The liveability objective is defined as: Enhances urban amenity and enables urban development outcomes

⁵² The access objective is defined as: Provides more efficient and reliable access for users

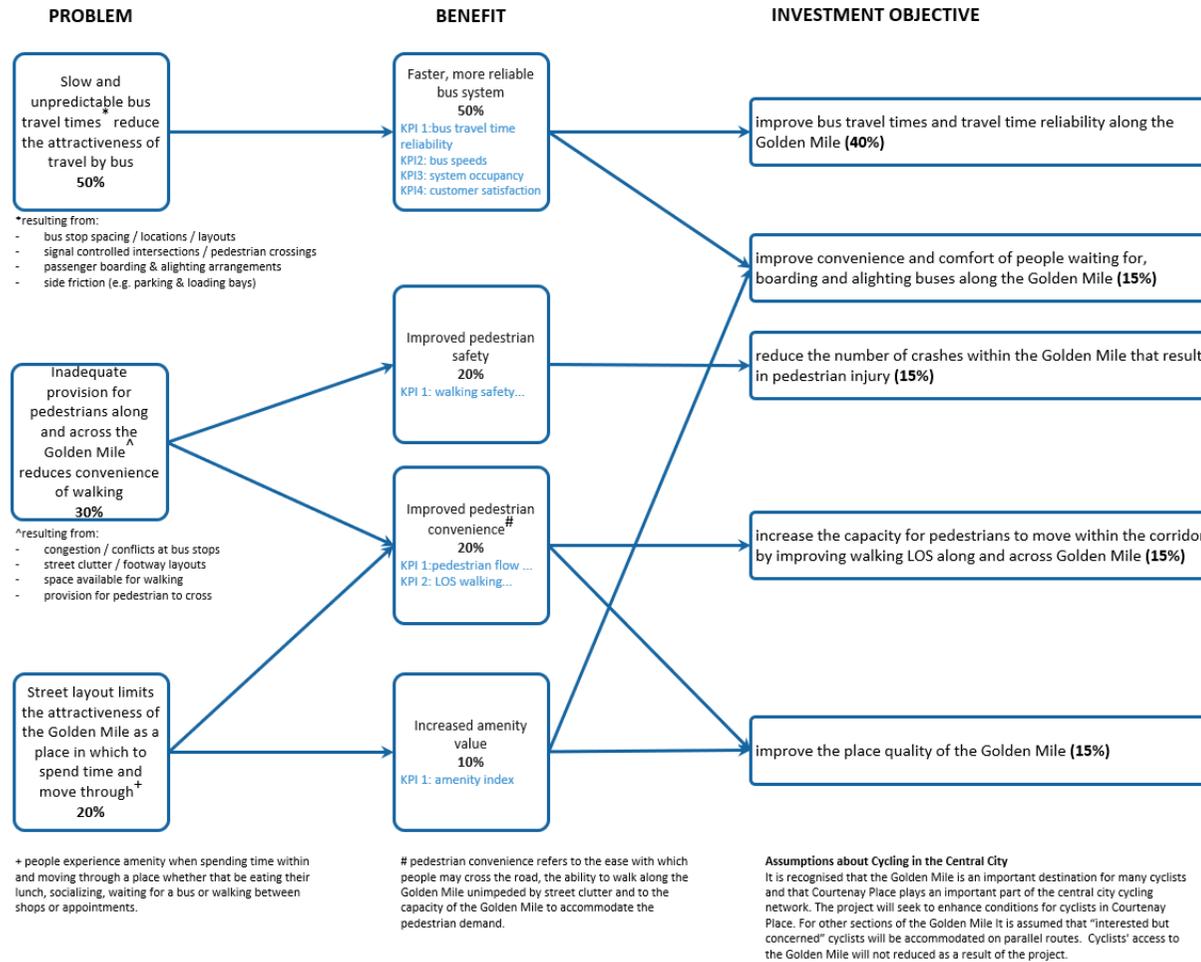
⁵³ The “carbon / mode” shift objective is defined as: Reduces carbon emissions and harmful emissions and increases mode shift by reducing reliance on private vehicles

⁵⁴ The safety objective is defined as: Improves safety for all users

⁵⁵ The resilience objective is defined as: Adaptable to disruptions and future uncertainty

Figure 32: Golden Mile Strategic Case ILM

Moving More People, Safely and More Reliably using Fewer Vehicles Accommodating the Growth of Wellington



3.13 Key Constraints, Dependencies and Assumptions

Table 21 sets out the key constraints, dependencies and assumptions to be considered / refined as the Golden Mile Project is developed.

Table 21: Key Constraints, Dependencies and Assumptions

Constraints		Notes
C1	Constrained Golden Mile project budget limits the consideration of improvement options to the legal road	Property acquisition costs for Golden Mile properties would be significant, and therefore improvement options that require property acquisition are effectively ruled out (meaning that improvement options are limited to the legal road corridor).
C2	Bus fares and pricing structures of bus and / or taxi services are out of scope	Changes to fares and pricing structures of bus and / or taxi services are excluded from consideration.
C3	Bus fleet changes are out of scope	Changes to bus fleet (including use of high-capacity buses beyond those already in use) are excluded from consideration.
C4	Bus routes, services and timetables are out of scope	Changes to bus routes, services and timetables are excluded from consideration.
C5	New car parks, changes to car park pricing or parking strategies are outside of scope	The addition of new car parks outside of the Golden Mile, changes to car park pricing or parking strategies are excluded from consideration.
C6	Major grade separation works (e.g. bridges or underpasses) and / or changes to roads or intersections beyond the extent of the Golden Mile are outside of scope	Major grade separation and / or changes to roads or intersections beyond the extent of the Golden Mile are excluded from consideration.
C7	Changing the 30km / hr speed limit is out of scope	Reviewing the new 30km / hr speed limit is excluded from consideration.
C8	The Golden Mile Project is to not be inconsistent with the proposed WCC City Strategic Cycle Network	Both Courtenay Place and Willis Street form part of the proposed WCC Strategic Cycle Network, and the Golden Mile Project is to be consistent with the direction of the strategy.
Dependencies		Notes and management strategies
D1	There is finite capacity on the Golden Mile to accommodate additional bus service or new routes	Bus volumes on the Golden Mile have been “capped” at 100 buses per hour, per direction of travel. Additional bus volumes beyond 100 vehicles per hour, per direction of travel are to be accommodated on an alternative (unspecified) north-south bus corridor.
D2	A second north-south bus corridor will carry significant public transport capacity and will provide a high-quality public transport spine	A second north-south bus corridor is to be progressed by LGWM (possibly as part of the City Streets Project). The Golden Mile (project team) is to engage with LGWM to identify the

		alignment and interfaces between the second spine project and the Golden Mile.
D3	Cycle connections to any new Golden Mile cycle facilities are to be provided by the City Streets Project	Cycle connections outside of the Golden Mile are to be progressed by LGWM as part of the City Streets Project. The Golden Mile (project team) is to engage with LGWM to identify key interfaces.
D4	Bus scheduling will be required to realise improvements to bus operations	Changes to bus stop locations is likely to require bus rescheduling. Rescheduling activities will be coordinated with GWRC / Metlink and bus operators as design and construction staging develops.
D5	Bus ticketing and advertising collateral material will require updating to reflect changes to bus stops	Changes to bus stop locations will be coordinated with GWRC / Metlink to ensure the ticketing system and collateral reflects the changes.
Assumptions		Notes and management strategies
A1	It is assumed that Mass Rapid Transit (MRT) is not located on the Golden Mile Corridor	Although not located on the Golden Mile, integration with future MRT will be needed at the intersection of Manners Street / Taranaki Street / Courtenay Place. This includes consideration of a potential interchange between MRT stops at this location and the Golden Mile corridor.
A2	There is an (existing) general acceptance of lower / less PMV access and a reduction or removal of on-street parking by LGWM and its partners	It is assumed that reducing or removing the use of PMVs for private access and the associated removal of on-street parking along the Golden Mile is acceptable to LGWM and partners.
A4	Public transport patronage and growth will return to pre-Covid levels and projections by 2036	It is assumed that public transport growth will return to pre-Covid levels by 2036.
A5	Patterns of employment and employment distribution will return to pre-Covid levels and projections by 2036	It is assumed that employment will return to pre-Covid levels by 2036.
A6	Population in the central city will increase by 18,000 over the next 30 years	This assumption is as per WCC's Spatial Plan.
A7	Demand for residential units in the Central City will increase by 8,000 over the next 30 years	This assumption is as per WCC's Spatial Plan.

3.14 The Case for Change

The Golden Mile is Wellington City’s prime employment, shopping and entertainment destination. It already accommodates very high pedestrian volumes and is the main bus corridor for moving people to destinations within the central city as well as through the city to other destinations. Since most of the city’s core bus routes pass along all or part of the Golden Mile, the performance of this corridor affects journeys across the whole city.

Wellington region is growing. Over the next 30 years the population is forecast to grow by 15 per cent, which equates to 75,000 extra residents. While the future is uncertain, forecasts suggest the population could be as much as 80,000, with much of this growth predicted to occur in the central city. With Wellington City likely to continue to be a regional employment hub, most new jobs are expected to be centred in the central city as well.

With current and future development patterns, it can be expected that demand for travel to and from the central city will continue to increase, with travel demand by public transport expected to grow as much as 50 per cent. While much of this new demand will be for travel by rail, the location of the Wellington Station on the northern edge of the city centre means that passengers will either walk or catch the bus along the Golden Mile to their ultimate destination.

Analysis suggests that the current transport system cannot accommodate this increase in demand. It has identified that a second public transport spine through the central city is needed to increase public transport capacity to support growth, and to further improve service reliability. The LGWM programme therefore has included a north-south MRT project along the waterfront and parallel to the Golden Mile in 2036. However, until MRT is operational, the Golden Mile needs to be optimised for people that travel by bus and on foot. Once MRT is operating, the Golden Mile will continue to perform an important role as a central city destination, as well as a corridor for moving people on buses and on foot.

The problems identified, and supporting evidence, have confirm that there is a need for improvements for the movement of buses along the Golden Mile and to make it a safer, more pleasant place in which to walk and spend time. This will in turn encourage more people to travel by bus and foot (and by other active modes), helping to achieve LGWM programme’s objectives (and in particular, its objective of *moving more people on fewer vehicles*).

The Golden Mile is an important place in its own right. It is a place with history, a place with culture, a place to shop, a place to work. It is therefore vital that improvements for movement are not made at the expense of the urban and retail experience. Changes that target improvements for movement may also create opportunities for enhancements to the public realm and for local businesses.

4 Economic Case

The purpose of this section of the report is to record the following:

- The Golden Mile do-minimum option scenario
- The option and development processes undertaken to identify the Preferred Option
- Identify key technical features of the Preferred Option, and
- How the Preferred Option responds to the problems and / or takes advantage of the opportunities.

4.1 Option Development and Assessment Processes

The *Golden Mile Multi Criteria Analysis (MCA) Report* (MCA Report), which is attached as **Appendix C**, sets out the development and assessment processes undertaken to evaluate the three options short listed for the Golden Mile Project.

The key option development and assessment processes are summarised following the commentary below on the key project assumptions and the do-minimum scenario.

4.1.1 Key Project Assumptions and Do-Minimum

The MCA Report records the key project assumptions and the do-minimum scenario used for assessing the short-listed options. The purpose of identifying the Golden Mile Project's key assumptions was to ensure that they were collectively well understood by each MCA assessor prior to them undertaking their option evaluations. The purpose of developing the do-minimum scenario was to enable the MCA assessors to compare each short-listed option against a "base case" option.

Key Project Assumptions

The key project assumptions for the purposes of the MCA process were as follows:

- Bus vehicle capacity on the Golden Mile is finite and the total number of buses served by the Golden Mile will be constrained. As such, it is assumed that bus volumes on the Golden Mile are capped at 100 buses per hour per direction, and any additional bus services over this cap will be accommodated on a second north-south bus corridor
- Option development was to be undertaken in accordance with Vision 2036, and there is a general acceptance of lower / less PMV access and a reduction / removal of on-street parking
- MRT would not be located on the Golden Mile (although it is expected that there would be an "integration point" at the Courtenay Place / Taranaki Street intersection)
- Despite MRT's future capacity potential, the Golden Mile bus route will still provide significant carrying capacity and would continue to be a high-quality public transport spine in the future
- Property acquisition was not anticipated, and options were to be developed to sit within the existing road corridor
- The assumed design year for travel demand and public transport patronage is 2036
- Public transport patronage and growth would return to pre-Covid growth projections by 2036

- Patterns of employment and employment distribution would return to pre-Covid levels by 2036
- Rates of car ownership and vehicle operating costs would remain consistent with existing forecasts, and
- There would be no change in temporal demands, with AM and PM peak demand periods continuing into 2036.

The following measures were identified as been excluded from the Golden Mile Project:

- Changes to fares and pricing structures of bus and / or taxi services
- Changes to bus fleet (including use of high-capacity buses beyond those already in use)
- Changes to bus routes, services and timetables
- The addition of new car parks, changes to car park pricing or parking strategies beyond the extent of the Golden Mile, and
- Major grade separation works (e.g. bridges, underpasses) and / or changes to roads or intersections beyond the extent of the Golden Mile.

Do-minimum Scenario

The key aspects of the do-minimum scenario for the purposes of the MCA process were as follows:

- Design year is 2036
- Population for Wellington City to increase from 211,000 (2018) to 240,000 by 2036
- Employment in the CBD to grow from 96,000 (2018) to 112,000 by 2036 but the additional trip demand is expected to be accommodated by non-PMV modes
- Public transport patronage in the CBD to increase from 28,000 (2016) to 37,000 by 2036
- Pedestrian growth in the CBD to grow from 11,000 (2019) to 13,500 by 2036
- Cyclist volumes in the CBD are expected to grow from 1000 to 2000 per day by 2036
- There will be little change in PMV volumes by 2036
- Total trip volumes to the CBD are expected to increase from 82,000 to 96,000 with the additional trip demand expected to be accommodated by non-PMV modes (PMV mode share is to reduce from 50 to 44 per cent, public mode share to increase from 35 to 39 per cent, and active mode share to increase from 15 to 18 per cent)
- Bus flows in the AM peak (October 2020) includes 88 buses per hour northbound and 81 buses per hour southbound. GWRC has brought 25 additional buses that will be fully operational by 2022. This will result in 101 buses per hour northbound and 93 buses per hour southbound by 2022
- The bus volume capacity of the Golden Mile is capped at 100 vehicles per hour per direction (any additional buses over this cap will be accommodated on alternative routes / corridors), and
- The following features of the Golden Mile will remain unchanged:

- land use mixes
- road cross sections, lane configurations and use of space
- loading, parking, taxi stands and disability parking bays
- location and extent of pedestrian crossings, and
- configuration of traffic movements and controls / intersections.

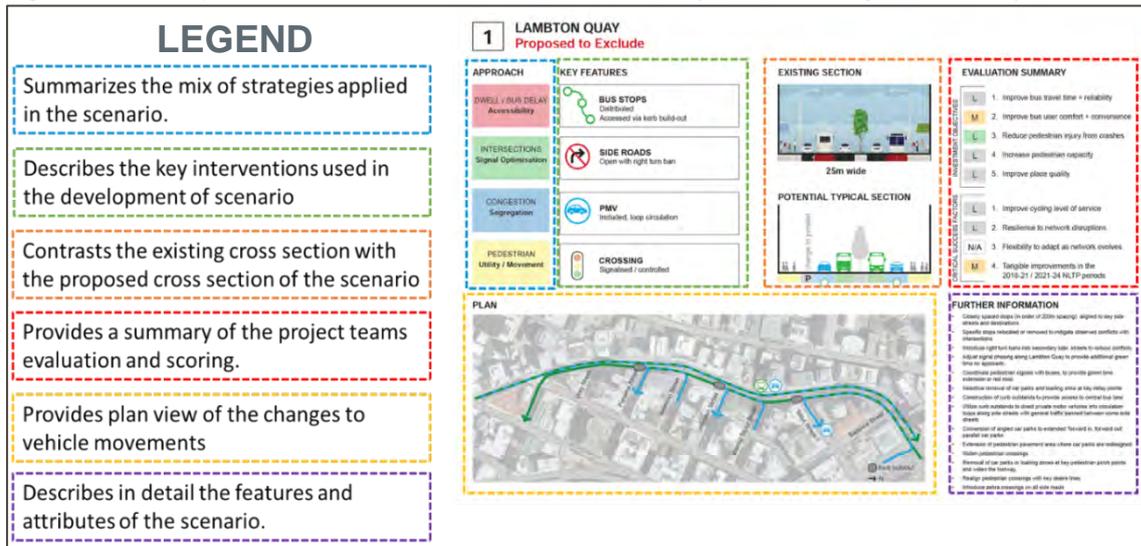
4.1.2 Golden Mile Long List Assessment Report

The *Golden Mile Long List Report*⁵⁶ (Long List Report) sets out the processes undertaken to identify a long list of intervention options and “mitigation / intervention strategies” that could help to address the problem statements and achieve the investment objectives identified in the Strategic Case. The key steps undertaken in the long list process included:

- Step 1: Development of an intervention “toolbox”. This toolbox ultimately identified over 150 different types of interventions that could address the problems and help to achieve the investment objectives
- Step 2: Additional “root cause” problem analysis. This process resulted in identification of the following four key strategic issues: dwell times; congestion; intersection delay / variability; and pedestrian / urban amenity
- Step 3: Development of “mitigation / intervention strategies” to address the key strategic issues for each section of the Golden Mile
- Step 4: Identification of over 250 “sub-section” mitigation / intervention scenarios for the Golden Mile. The scenarios not considered to be feasible or effective by the Golden Mile Project Team were removed from further consideration. This process eventually left 21 scenarios needing further assessment
- Step 6: Application of the mitigation / intervention strategies to each of the 21 scenarios in order to identify each scenario’s key features / attributes. This enabled before and after cross sections to be developed, as set out below in Figure 33.

⁵⁶ See: <https://lgwm.nz/assets/Documents/Technical-Documents/Golden-Mile/Golden-Mile-Long-List-Report-June-2020.pdf>

Figure 33: Example of Sub-Section Scenario Assessment (Lambton Quay Scenario 1)



- Step 7: Evaluation of the 21 scenarios through a high-level MCA process. This process involved evaluating each scenario against the investment objectives and “key considerations”⁵⁷ that had been identified in the Strategic Case. Through this evaluation process a further nine scenarios were eliminated, which left 12 scenarios needing further assessment.

The Long List Report concluded that further technical assessments were needed before any short listing of the remaining 12 scenarios could occur. The report identified that this additional work was required to further understand the corridor wide implications of each scenario and to determine whether any of them could be combined. It recommended that this additional investigation work be informed by responding to the following three questions:

- What is the optimum bus stop spacing / locations for the corridor? (i.e. to help inform both the potential to use high capacity stops at Lambton Quay and / or Courtenay Place and retain or simplify bus stops on Willis and Manners Streets)
- Whether to restrict traffic access from the Golden Mile and, if so, to what extent? (i.e. to help inform the key decision to remove PMV access from key segments of the Golden Mile and in particular, Willis Street), and
- How to allocate road space for buses, pedestrians and faster active modes? (i.e. to help inform the extent to which active carriageway may be repurposed at Lambton Quay and / or Courtenay Place).

4.1.3 Golden Mile Short List Assessment Report

The *Golden Mile Short List Report*⁵⁸ sets out the key development and assessment processes undertaken to evaluate the 12 remaining scenarios identified in the Long List Report. It also sets out how the scenarios were eventually “packaged” into the short-listed options.

⁵⁷ Refer to footnote 45 for more information

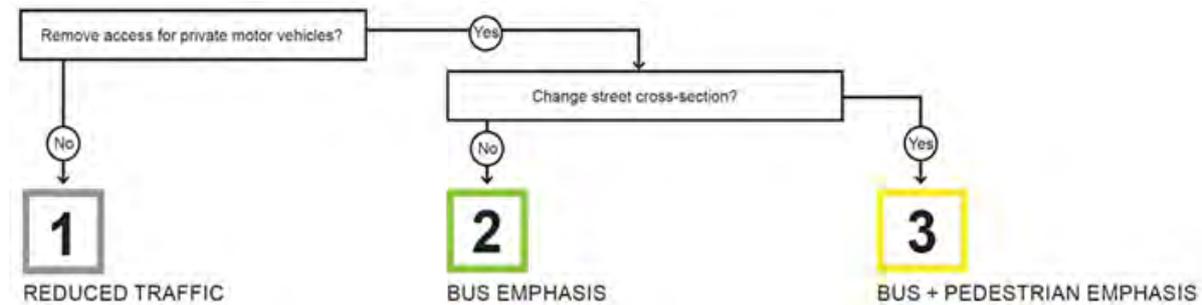
⁵⁸ See: <https://lgwm.nz/assets/Documents/Technical-Documents/Golden-Mile/Golden-Mile-Short-List-Report-June-2020.pdf>

To respond to the Long List Report’s questions, the Golden Mile Project Team undertook bus stop catchment and capacity modelling, “space allocation / cross section” evaluations as well as general transport modelling. Ultimately, this technical work enabled the project team to reach the following key conclusions:

- To achieve the greatest benefits for bus users and pedestrians (and cyclists / fast mobility devices), PMVs would need to be removed from the Golden Mile
- PMVs are currently a significant impediment to the capacity of the northbound bus stop on Willis Street, and therefore their removal would significantly improve the operation of buses on Willis Street
- The removal of PMVs from Lambton Quay without removing traffic from Willis Street would negatively impact bus operations at the Willis / Hunter Street intersection. It is therefore preferable that PMVs be removed from both Willis Street and Lambton Quay
- Transport modelling indicated that removing PMVs from Willis Street would have minimal impacts on wider CBD traffic movements
- The optimal bus stop configuration for the Golden Mile was likely to be a five paired bus stop arrangement, with Willis Street forming a key point of access for maintaining bus catchments on the Golden Mile
- The Manners Street / Cuba Street stop pair was viewed as being a critical boarding and alighting location for passengers accessing the Cuba Street Mall
- Overall bus capacity on the Golden Mile is limited by the size of bus stops, which in turn is limited by the available cross section. No one mix of improvements is likely to provide unlimited capacity for increased bus volumes along the Golden Mile as long as bus stops are retained, particularly at the key pinch points of Willis Street and Manners Street
- A reduction in carriageway from four lanes to two lanes on Lambton Quay and Courtenay Place would provide the greatest opportunity for improvements for pedestrians, cyclists and public realm. However, there would need to be a trade-off between providing for these activities and improving bus efficiency, which may involve the use of indented or off-line bus stops while maintaining a two lane bus carriageway elsewhere, and
- The restriction of PMVs on Courtenay Place and Willis Street (south of Mercer Street) would provide opportunities for implementation of WCC’s Strategic Cycle Network Plan.

Based on the above conclusions, and in order to further differentiate between the 12 scenarios, the Golden Mile Project Team developed a “decision-making tree” to help package the scenarios into short-listed options. This decision-making tree comprised of the two strategic questions as set out below in Figure 34:

Figure 34: Decision-Making Tree



If the response to Question One (i.e. whether to retain or remove PMVs from the Golden Mile) was “no”, then long list scenario combination of 1CW7 was identified to be pursued (referred to as the Reduced Traffic Option).

If, however the answer was “yes” to removing PMVs, then the next question related to whether the existing cross sections (i.e. on Lambton Quay and / or Courtenay Place) should be retained or the extra space (e.g. from the removal of indented bus stops) be converted to additional pedestrian and / or public realm space. If the response was to retain the existing cross sections, then long list scenario combination 2BX8 was identified to be pursued (referred to as the Bus Emphasis Option). If, however the response was to convert the extra space to additional pedestrian pavement / public realm, then long list scenario combination 3BX9 was identified to be pursued (referred to as the Bus + Pedestrian Emphasis Option).

In summary, the Golden Mile Project Team’s responses to the decision-making tree process enabled the following three scenarios to be identified (which were renamed as options in the Short List Report):

- Scenario 1CW7 (which was renamed Option 1)
 - Key features of this option included: restricting PMV movements; consolidation of bus stops; removal of on-street car parks; relocation of loading bays / taxi stands to side roads; closure of side road ends; and creation of new spaces for pedestrians / public realm.
- Scenario 2BX8 (which was renamed Option 2)
 - Key features of this option included: removal of PMV access; provision of two bus lanes in each direction on Courtenay Place and Lambton Quay; consolidation of bus stops; removal of on-street car parks; relocation of loading bays / taxi stands to side roads; closure of side road ends; and creation of new spaces for pedestrians / public realm.
- Scenario 3BX9 (which was renamed Option 3)
 - Key features of this option included: removal of PMV access; provision of two dedicated bus lanes along the entire Golden Mile; consolidation of bus stops; removal of on-street car parking; relocation of loading / taxi bays to side roads; closure of side road ends; creation of significant new spaces for pedestrians / public realm; and dedicated cycling opportunities (e.g. Courtenay Place).

Prior to undertaking final MCA processes for the above short-listed options, LGWM identified that community feedback on the options was needed before decisions on option preferences could be identified.

4.1.4 Community Engagement

Community engagement on the short-listed options was undertaken from June to August 2020. One of the key purposes of the community engagement programme was to provide the community with an opportunity to comment on each of the options before undertaking final MCA and LGWM decision making processes.

This section of the report provides a brief overview of the engagement feedback received on the short-listed options. Further information on the findings of the engagement programme can be found in the *Golden Mile Engagement Summary Report*⁵⁹.

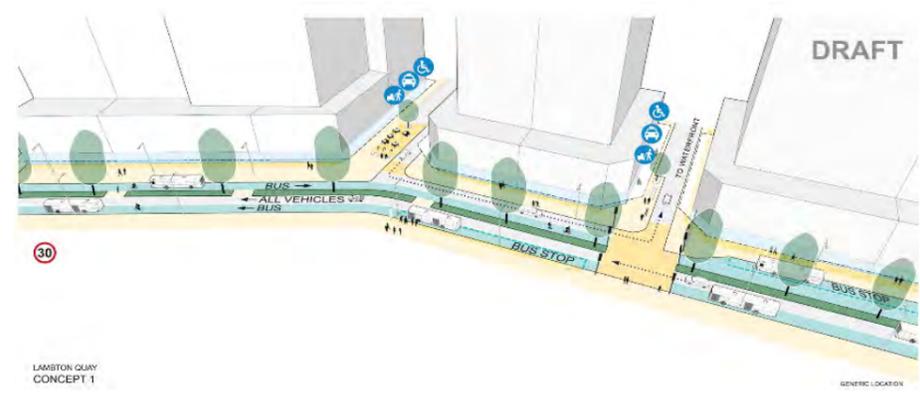
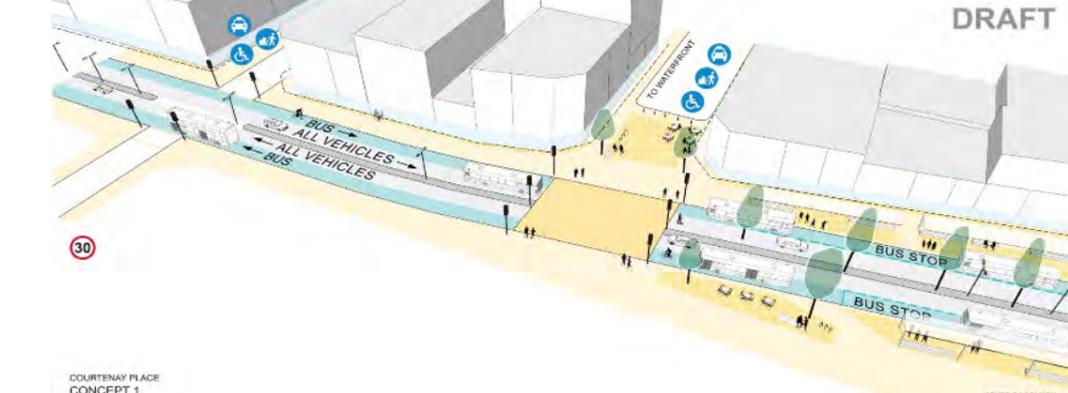
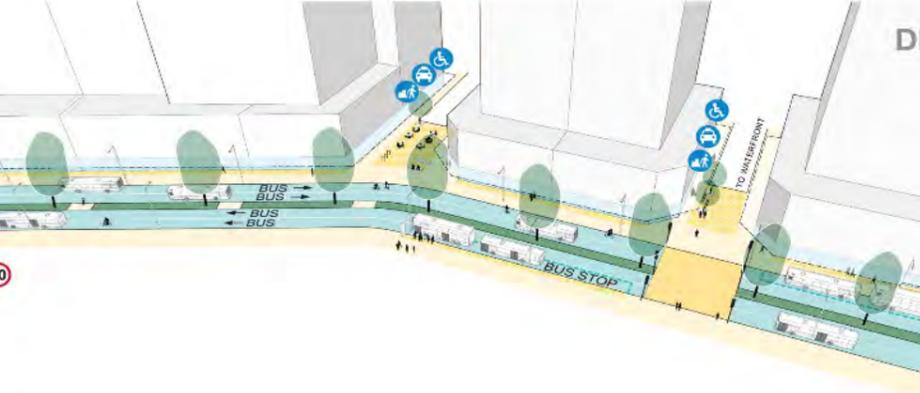
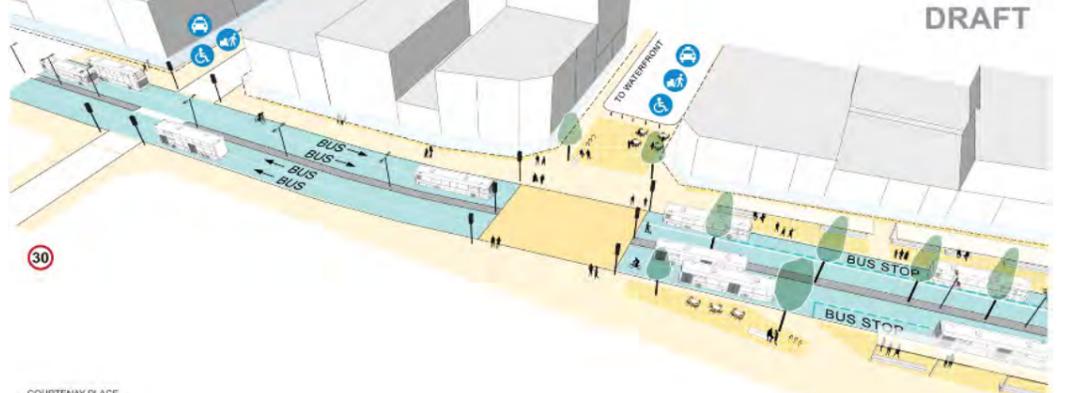
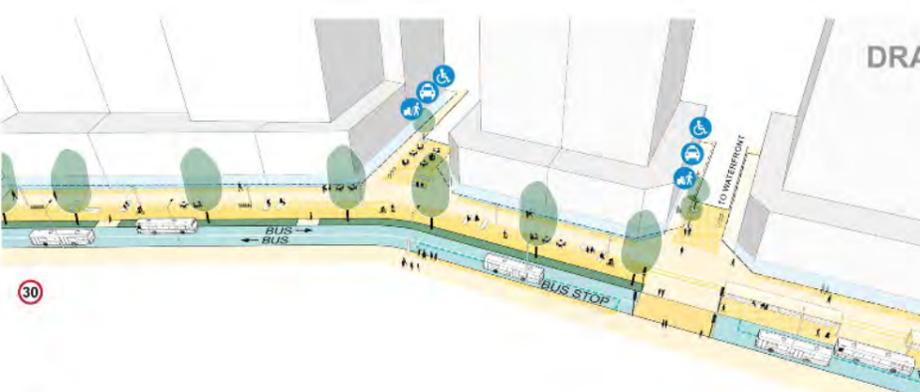
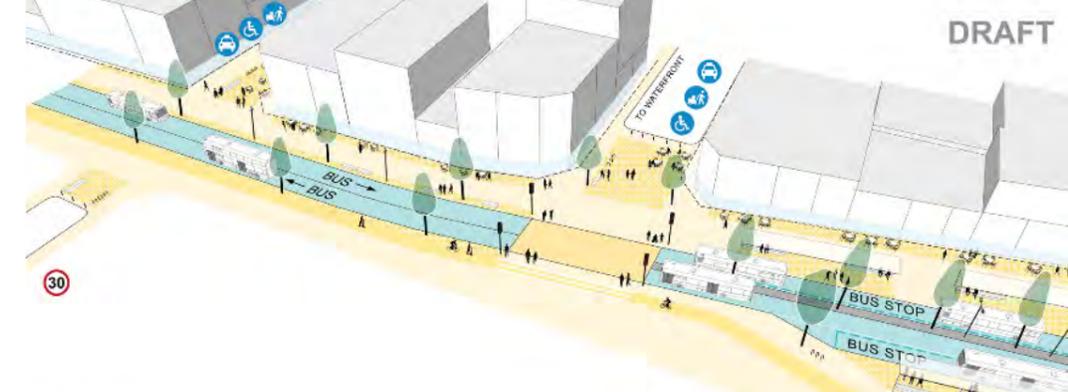
It is noted that for the purposes of the community engagement programme, the short-listed options were referred to as concepts (rather than options). A summary of the concept descriptions provided for public engagement is set out in Table 22 below. In addition, each concept's indicative cross section for Lambton Quay and Courtenay Place are provided in Table 23 below.

⁵⁹ See: <https://lgwm.nz/assets/Documents/Technical-Documents/Early-Interventions/Golden-Mile-engagement-report-June-August-2020.pdf>

Table 22: Summary Descriptions of the Concepts identified for the Golden Mile Community Programme 2020

Concept One: "Streamline" (i.e. Short Listed Option 1)	Concept Two: "Prioritise" (i.e. Short Listed Option 2)	Concept Three: "Transform" (i.e. Short Listed Option 3)
<p>Key features:</p> <ul style="list-style-type: none"> PMV access retained (except for Manners Street, east of Cuba Street), some turning restrictions would apply on Lambton Quay Ends of Blair, Allen, Cuba and Mercer Streets closed Loading zones and taxi stands relocated to side streets On-street car parking removed <p>(removal of on-street car parks and relocation of loading bays / taxi stands would provide a combined 30% more footpath space)</p> <ul style="list-style-type: none"> Bus stops consolidated to improve bus reliability [a maximum five-minute walk to a bus stop (for someone walking at an average speed)], and Emergency vehicle access would be allowed 24 / 7 	<p>Key features:</p> <ul style="list-style-type: none"> PMV access removed Two bus lanes in each direction on Courtenay Place and Lambton Quay Ends of Blair, Allen, Cuba and Mercer Streets closed Ends of Ballance, Stout, Waring Taylor, Johnson, Brandon and Panama Streets closed Loading zones and taxi stands relocated to side streets On-street car parking removed <p>(removal of on-street car parks and relocation of loading bays / taxi stands would provide a combined 30% more footpath space)</p> <ul style="list-style-type: none"> Bus stops consolidated to improve bus reliability [a maximum five-minute walk to a bus stop (for someone walking at an average speed)], and Emergency vehicle access would be allowed 24 / 7. 	<p>Key features:</p> <ul style="list-style-type: none"> PMV access removed One bus lane in each direction along the entire Golden Mile (bus stops would be located "in-line") Ends of Blair, Allen, Cuba and Mercer Streets closed Ends of Ballance, Stout, Waring Taylor, Johnson, Brandon and Panama Streets closed Ends of Tory Street closed Option to provide a dedicated or shared space for cyclists and fast active modes (e.g. e-scooters) on Courtenay Place and Lambton Quay (north of Panama Street) Loading zones and taxi stands relocated to side streets On-street car parking removed <p>(removal of on-street car parks and relocation of loading bays / taxi stands would provide a combined 75% more footpath space)</p> <ul style="list-style-type: none"> Bus stops consolidated to improve bus reliability [a maximum five-minute walk to a bus stop (for someone walking at an average speed)], and Emergency vehicle access would be allowed 24 / 7. 

Table 23: Indicative Cross Sections for Lambton Quay and Courtenay Place

	Lambton Quay Indicative Cross Section Layout	Courtenay Place Indicative Cross Section Layout
<p>Concept One: "Streamline" (i.e. Short Listed Option 1)</p>	 <p>LAMBTON QUAY CONCEPT 1</p>	 <p>COURTENAY PLACE CONCEPT 1</p>
<p>Concept Two: "Prioritise" (i.e. Short Listed Option 2)</p>	 <p>LAMBTON QUAY CONCEPT 2</p>	 <p>COURTENAY PLACE CONCEPT 2</p>
<p>Concept Three: "Transform" (i.e. Short Listed Option 3)</p>	 <p>LAMBTON QUAY CONCEPT 3</p>	 <p>COURTENAY PLACE CONCEPT 3a</p>

The key engagement questions asked by the community engagement programme included:

- What do you like about each concept and why?, and
- What don't you like about this concept and why?

Feedback was also sought on what people thought about providing extra space for cyclists and fast active modes, allowing certain vehicles (such as taxis, delivery and maintenance vehicles) to access the Golden Mile and how they would like to see the extra space at the end of closed side roads used.

Summary of Community Feedback

The key comments received for each concept (and the other questions asked) are summarised below:

Concept One

The key comments received on Concept One are summarised as follows:

- Some liked its balance, that it retains some general traffic while providing some improvements at a reasonable cost and would have least impact on retail / business activity, and
- Some didn't like that it wouldn't lead to significant change.

Concept Two

The key comments received on Concept Two are summarised as follows:

- Some liked the removal of PMVs, and it was a good step-up from Concept One
- Whilst some liked the proposal of giving public transport priority, some questioned whether two bus lanes in each direction on Lambton Quay and Courtenay Place was the best way to achieve this outcome. Key concerns included safety for people crossing the road and whether it was the best allocation of corridor space, and
- Others didn't like the removal of PMVs, on-street car parks and loading zones as they felt that these measures would have negative impacts on retail / business activity and personal security.

Concept Three

The key comments received on Concept Three are summarised as follows:

- Some liked the significant increase in pedestrian space, along with the provision of space for cycling and fast active modes
- Some were concerned that removal of PMVs, on-street parking and loading zones would have negative impacts on local businesses and personal security
- Some felt that the design, particularly closing ends of side roads, would attract more people and result in additional economic benefits
- Some raised concerns that having only one bus lane in each direction would mean buses may not be able to overtake each other, particularly at the in-line bus stops, which would slow bus journeys down, and

- Some noted that this concept had the highest costs and that moving to this concept could be undertaken over time to help manage costs and impacts.

Other Comments

Other key comments received that did not specifically relate to a concept included:

- Some were supportive of consolidating the number of bus stops (noting that the current bus stop configuration was impacting on bus travel times / reliability). Others were less supportive of consolidating bus stops, expressing concern that people with limited mobility would be negatively impacted
- Some were supportive of having new space made available for cycling and other fast active modes along both Lambton Quay and Courtenay Place. However, most felt it was important that such facilities were physically separated from other modes, as it would be safer and would attract more users, and
- Some were supportive of retaining service vehicles at certain times of the day / night on the Golden Mile.

Overall, nearly 2000 people commented on the short-listed options, with the majority expressing a preference for Concept Three for Lambton Quay, Willis Street and Courtenay Place (people weren't asked to specifically comment on Manners Street). The majority also supported providing cycling facilities and retaining loading bays / taxis stands on the Golden Mile (or were supportive of allowing taxis to use the Golden Mile at certain times of the day / night).

However, the retail and hospitality business sectors did express concern that the concepts or certain aspects of the concepts (e.g. reducing on-street parking, PMV access and or service vehicle access), would impact negatively on retail / business activity. The impacts and future uncertainties of Covid-19 heightened these concerns.

4.1.5 Post Community Engagement Programme Discussions

During November 2020, LGWM undertook further engagement with some submitters to improve its understanding of their submissions. The key themes to emerge from this additional engagement included:

- The ability for businesses, particularly hospitality and retail, to be serviced via loading zones and / or “drop off” zones was important
- The ability of some large commercial vehicles currently servicing the Golden Mile to turn around if restricted to side road access
- Time of day service vehicle restrictions could be supported if the hours worked for the retailers / businesses and service delivery companies
- Support for alternative parking arrangement options. Some noted that easy and accessible car parking is required to encourage patrons to the city and to support retail and hospitality industries (e.g. replace the Golden Mile on-street car parks with new and affordable car parks that are located near the Golden Mile)
- There are a high number of “CBD workers” working from home following Covid-19, and there is uncertainty as to how many of them will eventually return, and what reduced worker numbers “might look like” for the future of the Golden Mile
- Designs for the pedestrian space and new urban amenity areas needed to encourage / enhance foot traffic and to provide for green infrastructure. Some

believed that good urban design improvements would in turn support the retail and hospitality sectors, and

- Disability parks should be kept as close as possible to the Golden Mile (e.g. on either side streets or provide “drop off” zones on the Golden Mile).

4.1.6 Assessing the Short-Listed Options

This section of the report summarises the MCA processes and outcomes of the final MCA process for the short-listed options for the Golden Mile Project. The key purpose of undertaking the MCA was to help identify option preferences for each section of the Golden Mile to be advanced to the second stage of the SSBC.

It is important to note that an MCA is just a tool to help probe the dimensions of a problem and inform decision-making. It is not the “decisionmaker” itself.

MCA Assessment Criteria and MCA Assessors

The first key step in the MCA process was to select the relevant MCA assessment areas for evaluating the short-listed options, and then, to select the expert MCA assessors who would undertake each assessment. It is noted that the assessment criteria and selection of the MCA assessors was undertaken in accordance with the LGWM’s MCA guidelines framework.

Preparing for the MCA Assessments

In order to prepare for the MCA Workshop, two pre-workshop briefings were held with the MCA assessors to outline the “MCA instructions”.⁶⁰ In summary, these instructions included the following:

- An MCA workshop would be held on Monday 30 November 2020 [which would adopt the Decision Conferencing approach (i.e. where scoring and weightings are identified through discussion and consensus, but informed by expert views)]
- The option drawings to be evaluated were the corridor diagrams identified in the Golden Mile Short List Report⁶¹
- Where possible, the assessments should be evidence based (e.g. using quantitative information) to inform the MCA assessor’s overall assessment
- The rationale or logic (e.g. methodology) underpinning each assessment needs to be transparent, simple and easily understandable
- The assessment is to primarily focus on the performance of each option within the next ten years (i.e. prior to the MRT package coming online)
- The short-listed options were to be compared against the do-minimum scenario (it is noted that each MCA assessor were also asked to be familiar with the Golden Mile’s key project assumptions)
- The short-listed options were to be evaluated on a section-by-section basis (e.g. Lambton Quay, Willis Street, Manners Street and Courtenay Place)
- To provide comment on the impacts of the short-listed options: if loading bays on the Golden Mile were to be retained; if a combination of loading bays / taxi stands were

⁶⁰ It is noted that key members of LGWM and its subject matter experts attended the second specialist briefing No. 2 held on 1 November 2020

⁶¹ Golden Mile Short List Assessment Report (2020), Appendix E

to be retained on the Golden Mile; if north / south through traffic at the Tory Street / Courtenay Place intersection was to be retained for Option 3; and the impacts on faster active modes (e.g. cyclists and e-scooters)

- A 7-point scoring system was to be used to score each option (against the do-minimum scenario described above) as set out in Table 24 below:

Table 24: 7-point Scoring System

Score	Scoring Description	Definition
3	Large Positive	Major positive impacts resulting in substantial and long-term improvements or enhancements of the existing environment.
2	Medium Positive	Moderate positive impact, possibly of short-, medium- or long-term duration. Positive outcome may be in terms of new opportunities and outcomes of enhancement or improvement.
1	Slight Positive	Minimal positive impact, possibly only lasting over the short term. May be confined to a limited area.
0	Neutral	Neutral: no discernible or predicted positive or negative impact.
-1	Slight Negative	Minimal negative impact, possibly only lasting over the short term, and definitely able to be managed or mitigated. May be confined to a small area.
-2	Medium Negative	Moderate negative impact. Impacts may be short, medium or long term and are highly likely to respond to management actions.
-3	Large Negative	Impacts with serious, long-term and possibly irreversible effect leading to serious damage, degradation or deterioration of the physical, economic, cultural or social environment. Required major rescope of concept, design, location and justification or requires major commitment to extensive management strategies to mitigate the effect.

- All scoring was to be absolute (that is, no artificial distinctions were to be made between the options to 'spread' their scoring)
- The do-minimum scenario would automatically receive a score of zero (0)
- The costs, benefits and value for money criteria would be considered in the MCA spreadsheet (and evaluation outcomes presented), but would not be assigned specific scores, and
- Weightings would be applied to the unweighted (i.e. raw) scores for sensitivity testing purposes (e.g. workshop weightings).

At both pre-workshop briefings, a summary of the outcomes of the Golden Mile Community Engagement Report was provided, as well as a copy of the full report.

Outcomes of the MCA Unweighted Assessments

The MCA Workshop for the Golden Mile was held on Monday 30 November 2020. It was attended by the MCA assessors, key members of the Golden Mile Project Team, observers from LGWM as well as representatives from Taranaki Whānui and Ngāti Toa.

The outcomes of the MCA assessors unweighted (i.e. raw) scores for each short-listed option are set out in Table 25 below. Further information on each MCA assessors' evaluation and scores for their respective assessment criteria is provided in the MCA Report. As noted above, the cost estimate ranges, net benefit and value for money criteria [i.e. Benefit Cost Ratio (BCR) ranges] assessments were not assigned specific scores (but the outcomes of these assessments are presented in Table 25 below).

It is noted that for the purposes of the MCA, as there were no differentiators between the short-listed options for Manners Street (e.g. PMVs removed, end of Lower Cuba Street closed, loading bays relocated), just one evaluation / score was provided for a Manners Street "All Options" option.

Table 25: MCA Assessor's Unweighted (i.e. raw) Option Scores

Assessment area	Lambton Quay				Willis Street				Manners Street		Courtenay Place			
	Do-Minimum	Option 1	Option 2	Option 3	Do-Minimum	Option 1	Option 2	Option 3	Do-Minimum	All Options	Do-Minimum	Option 1	Option 2	Option 3
Delivery of Objectives														
Bus Travel Time and Reliability	0	1	2	1	0	1	2	2	0	1	0	1	2	2
Bus Passenger Boarding and Alighting Comfort and Convenience	0	1	3	2	0	1	1	2	0	1	0	2	3	2
Pedestrian Safety	0	1	0	2	0	1	1	1	0	1	0	1	0	2
Pedestrian Capacity	0	1	2	2	0	1	1	2	0	1	0	1	2	2
Improve Place quality	0	0	1	3	0	1	1	1	0	0	0	0	1	3
Effects														
Social	0	0	1	3	0	1	2	3	0	0	0	1	2	3
Retail Impacts	0	1	1	2	0	1	1	2	0	0	0	1	1	1
Cycling Level of Service	0	1	1	3	0	0	0	-1	0	-1	0	1	1	3
General (Road) Safety	0	1	1	2	0	1	1	1	0	1	0	1	1	2
Sustainability	0	1	1	3	0	1	1	3	0	0	0	1	1	3
Fit with LGWM Programme	0	0	3	3	0	-1	-1	-1	0	0	0	2	3	2
Delivery, maintenance, and operations														
Delivery	0	-1	-1	-2	0	-1	-1	-2	0	-1	0	-1	-1	-2
Operations and Maintenance	0	-1	-2	-3	0	-1	-2	-3	0	-1	0	-1	-2	-3
Timeframe for Delivery	0	2	2	2	0	2	2	2	0	2	0	2	2	2
Final scores and rankings														
Total scores	0	8	15	23	0	8	9	12	0	4	0	12	16	22
Final rankings		3 rd	2 nd	1 st		3 rd	2 nd	1 st		All Options		3 rd	2 nd	1 st

Cost, benefit, and value for money ranges			
Assessment criteria	Option 1	Option 2	Option 3
Cost estimates range (real)	\$15M - \$23M	\$21M - \$32M	\$52M - \$79M
Discounted Costs (present value)	\$14M - \$20M	\$19M - \$29M	\$47M - \$72M
Benefit ranges (present value)	\$31M - \$57M	\$42M - \$219M	\$87M - \$505M
Indicative BCR ranges (i.e. value for money)	1.6 - 4.2	1.5 - 12	1.2 - 11



Individual benefit components	Option 1 (\$M)	Option 2 (\$M)	Option 3 (\$M)
Car travel time impact	-\$6.2 - \$4.8	-\$79 - \$37	-\$79 - \$37
Public transport travel time benefit	\$18 - \$24	\$26 - \$34	\$23 - \$30
Public transport reliability benefit	\$4.7 - \$6.1	\$9.1 - \$12	\$9.1 - \$12
Pedestrian realm benefits	\$11 - \$17	\$81 - \$128	\$122 - \$407
Pedestrian travel time benefits	\$3.1 - \$4.9	\$5.8 - \$9.4	\$13 - \$20

Outcomes of the MCA Weighting Scenario Assessments

Table 25 above sets out the MCA assessors unweighted (or raw scores) for each of the short-listed options. In addition, to identifying these scores, a weighting scenario exercise was undertaken by the Golden Mile Project Team to test the various sensitivities of the unweighted scores to matters considered under various weighting themes.

To test sensitivities a range of weighting systems were applied to the MCA assessor's unweighted scores. These weighting scenarios are summarised below and described in further detail in the MCA Report.

Workshop Weighting

A “workshop weighting” scenario reflects the importance that the MCA assessors placed on each individual assessment criterion at the MCA Workshop.

The workshop weighting discussion was undertaken at the end of the scoring component of the MCA Workshop. To facilitate the discussion the assessors were asked to identify how important they considered the different assessment criteria to be by assigning low medium and high rankings to each assessment criterion. The Golden Mile Project Team subsequently then applied numerical percentages to the rankings following completion of the workshop. At the workshop, the MCA assessors identified the following assessment areas to be either of high, medium or low-ranking importance:

High

- Investment objectives
- Retail impacts
- Operations and maintenance

Medium

- Social
- Cycling level of service
- General (road) safety
- Sustainability

Low

- Fit with LGWM programme
- Delivery
- Timeframe for delivery

Although not included directly in the weightings (as they were not assigned a specific score), the MCA assessors advised that the cost estimates, benefits / disbenefits and value for money criteria would ‘normally’ receive High rankings as well.

Investment Objectives Weighting

This weighting was based on LGWM's priorities and investment objectives and assigned a higher weighting to all MCA scores that related to the achievement of the investment objectives according to the relative emphasis placed on each investment objective.

Focus on Improving the Public Realm Weighting

This weighting placed increased emphasis on improving public realm, by increasing the weighting applied to place and pedestrians.

Focus on People Movement

The weighting scenario placed emphasis on interventions that move people through the corridor, with increased weighting applied to bus travel time and pedestrian capacity.

Focus on Safety Weighting

This weighting scenario placed increased importance on safety outcomes and reduces the overall weighting applied to investment objectives, while increasing the weighting applied to pedestrian and general safety.

Programme Fit and Delivery Focus Weighting

This weighting scenario placed increased emphasis on broader programme fit and the ability to quickly deliver outcomes. It reduces the overall weightings for investment objectives and applies increased weighing to program fit and delivery aspects.

Economic Focus Weighting

This weighting scenario assumes priority is placed on achieving maximum economic return.

Social Focus Weighting

This weighting scenario placed increased emphasis on relative social support and business impacts. It reduces the overall weightings for investment objectives and applies increased weighting to social and business impacts.

Weighting Scenarios Evaluation Summary

Table 26 compares the unweighted (i.e. raw) scores with the weighting scenario scores.

Table 26: Weighted Scenarios and Unweighted (i.e. raw) Rankings

Golden Mile Section	Option	Unweighted Score	Investment Objective Weightings	Focus on improving the public realm	Focus on people movement	Focus on Safety	Program fit and delivery focus	Economic Focus	Social Focus	Workshop Weighting
Lambton Quay	Do-Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Option 1	1.47	0.13	0.11	0.13	0.13	0.09	0.12	0.09	0.11
	Option 2	2.43	0.23	0.19	0.23	0.12	0.19	0.21	0.13	0.23
	Option 3	3.67	0.24	0.28	0.23	0.25	0.19	0.26	0.25	0.28
Lambton Quay Option Preference		Option 3	Option 3	Option 3	Option 3	Option 3	Option 3	Option 3	Option 3	Option 3
Willis Street	Do-Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Option 2	1.50	0.14	0.14	0.14	0.13	0.06	0.14	0.10	0.14
	Option 1	1.37	0.14	0.13	0.16	0.11	0.04	0.14	0.09	0.16
	Option 3	1.77	0.18	0.15	0.19	0.13	0.16	0.16	0.17	0.08
Willis Street Option Preference		Option 3	Option 3	Option 3	Option 3	Option 2	Option 3	Option 3	Option 3	Option 1
Manners Street	Do-Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Options	0.80	0.11	0.08	0.11	0.10	0.06	0.10	0.03	0.10
Manners Street Option Preference		All options	All options	All options	All options	All options	All options	All options	All options	All options
Courtenay Place	Do-Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Option 1	2.17	0.18	0.14	0.16	0.15	0.17	0.16	0.14	0.15
	Option 2	2.23	0.20	0.17	0.22	0.04	0.18	0.18	0.13	0.19
	Option 3	3.53	0.26	0.29	0.26	0.25	0.15	0.28	0.22	0.31
Willis Street Option Preference		Option 3	Option 3	Option 3	Option 3	Option 3	Option 3	Option 3	Option 3	Option 3

4.1.7 Recommended Option for each Golden Mile Section

The following commentary discusses the unweighted scores and weighing scenario assessments for each *option* for each *section* of the Golden Mile. This section also identifies the technically preferred option preference for each section of the Golden Mile that was ultimately recommended to LGWM for consideration / endorsement.

Lambton Quay

Option 3 for Lambton Quay was ranked first under both the unweighted and weighted scenario assessments. In summary, it was ranked first due to its higher scores (i.e. +3s) for the improved place quality, social, cycling, sustainability and fit with LGWM programme assessment criterion. It also scored well (i.e. +2s) for bus boarding / alighting, comfort and convenience, pedestrian / general (road) safety, pedestrian capacity, retail impacts and timeframe for delivery assessment criterion. Through the MCA Workshop process, a number of the MCA assessors identified design opportunities to further refine Option 3's design for Lambton Quay (e.g. providing indented bus stops rather than in-line bus stops).

Option 3 did score negatively for the delivery and operations / maintenance criterion (scoring a -2 and -3 respectively). The challenges identified in the respective MCA assessments for both criteria (e.g. narrow lanes and footpaths during construction) will need to be considered further as the Golden Mile Project is developed.

For completeness, it is noted that most of the community feedback received through the Golden Mile Engagement Programme expressed a preference for Option 3 for Lambton Quay.

Accordingly, Option 3 was identified as the technically preferred option for Lambton Quay.

Willis Street

Option 3 for Willis Street was ranked first under both the unweighted and weighted scenario assessments. In summary, it was ranked first due to its higher scores (i.e. +2s) for the bus travel time / reliability, for bus boarding / alighting, comfort and convenience, pedestrian capacity, retail impacts, and timeframe for delivery assessment criterion. The social assessment criteria scored the highest for Option 3 (i.e. +3).

Option 3 scored a -1 for the cycling assessment criterion (e.g. safety concerns were raised for northbound cyclists). Challenges for delivery and operations / maintenance were also identified for Option 3 (both evaluations scored a -2 and -3 respectively). The challenges identified for these assessment criteria (e.g. limited space for bikes to pass stationary buses, and construction disruption) will need to be considered further as the Golden Mile Project is developed.

For completeness, it is noted that most of the community feedback received through the Golden Mile Engagement Programme expressed a preference for Option 3 for Willis Street.

Accordingly, Option 3 was identified as the technically preferred option for Willis Street.

Manners Street

The “All Options” option for Manners Street scored a range of 0s and +1s. Scores of +1 were recorded for the bus travel time / reliability, for bus boarding / alighting, comfort and convenience, pedestrian safety / general (road) safety and pedestrian capacity assessment criterion. It is noted that the highest scoring assessment criteria was the timeframe for delivery criteria (i.e. +2). These scores reflect that this option will have positive impacts.

Concerns were however noted for cycling on Manners Street (which scored a -1). There were also some challenges identified from a delivery and operations / maintenance perspective (scores of -1 were recorded for both assessment criteria). The challenges identified for these assessment criterion (e.g. no dedicated cycling provision, and construction disruption) will need to be considered further as the Golden Mile Project is developed.

As effectively only one option was proposed for Manners Street, and the MCA scoring demonstrated positive impacts, the Manners Street “All Options” option was therefore identified as the technically preferred option.

Courtenay Place

Option 3 was ranked first under both the unweighted and weighted scenario assessments. In summary, it was ranked first due to its higher scores (i.e. +3s) for the improved place quality, social, cycling and sustainability assessment criterion. It also scored well (i.e. +2s) for the bus travel time / reliability, bus boarding / alighting, comfort and convenience, pedestrian / general (road) safety, pedestrian capacity, fit with LGWM programme and the timeframe for delivery assessment criterion. It however scored lower (when compared to the other options) for retail impacts (with a score of +1). Through the MCA Workshop process, a number of the MCA assessors identified design opportunities to further refine Option 3’s design for Lambton Quay (e.g. providing indented bus stops rather than in-line bus stops).

Option 3 did score negatively for the delivery and operations / maintenance criterion (scoring a -2 and -3 respectively). The challenges identified in the respective MCA assessments for both criteria (e.g. narrow lanes and footpaths during construction) will need to be considered further as the Golden Mile Project is developed.

For completeness, it is noted that most of the community feedback received through the Golden Mile Engagement Programme expressed a preference for Option 3 for Courtenay Place.

Accordingly, Option 3 was identified as the technically preferred option for Courtenay Place.

4.1.8 Summary of Recommended Technical Option Preferences

Table 27 summarises the technical option preferences identified through the MCA process for each section of the Golden Mile. As set out below, these preferences were recommended to the LGWM Board to be advanced to the second stage of the SSBC.

Table 27: Recommended Option Preferences

Golden Mile Section	Recommended Technical Option Preference
Lambton Quay	3
Willis Street	3
Manners Street	All Options
Courtenay Place	3

Opportunities for further Design Refinement

Through the MCA process, the MCA assessors identified opportunities to further refine Option 3’s design, including:

- Considering indented bus stops instead of in-line bus stops
- Retaining north / south through traffic at the Tory Street / Courtenay Place intersection (rather than full closure)
- Considering how cycling provisions on Courtenay Place and / or Lambton Quay would integrate with WCC’s strategic cycling network plans
- The retention of loading bays and / or taxis stands on the Golden Mile outside of peak hours (and improving existing loading bay / taxi enforcement), and considering further as to how these facilities could be transitioned overtime to the Golden Mile’s side roads, and
- Investigating further the material costs for new pedestrian / public realm spaces, including considering implementing different treatments along the Golden Mile.

4.1.9 LGWM Board Endorsement of Option 3

At the LGWM Board meeting on 28 April 2021, the Board endorsed the technical option preferences recommended for each section of the Golden Mile for further development. That is, the preference to advance Option 3 for Lambton Quay, Willis Street and Courtenay Place and the “All options” option for Manners Street (collectively referred to as the Preferred Option).

The Board’s endorsement of the technical option preferences was publicly announced on 17 June 2021.⁶²

⁶² [Let’s Get Wellington Moving gets public backing to transform the Golden Mile » Let’s Get Wellington Moving \(lgwm.nz\)](#)

4.2 Preferred Option Description

The key high-level features of the Preferred Option that are *in-scope* are as follows:

- PMV access removed from the entirety of the Golden Mile
- One bus lane in each direction along the entire Golden Mile (with no physical separation between the lanes)
- Bus stops will be indented at either end of the Golden Mile, with mid-block stops in-line
- Ends of Blair, Allen, Cuba, Mercer, Ballance, Stout, Waring Taylor, Johnson, Brandon and Panama Streets closed (north / south through traffic at the Tory Street / Courtenay Place intersection allowed)
- Dedicated or shared space for cyclists and fast active modes (e.g. e-scooters) on Courtenay Place and Lambton Quay (north of Panama Street)
- Some loading zones and taxi stands relocated to side streets (loading zones for large service vehicles to be provided on the Golden Mile based on temporal arrangements)
- On-street car parking on the Golden Mile removed (existing parking arrangements on side roads connecting to the Golden Mile to be modified)
- Emergency vehicle access to be allowed 24 / 7, and
- Bus stops consolidated to improve bus reliability [a maximum five-minute walk to a bus stop (for someone walking at an average speed)] as indicatively set out in Figure 35:

Figure 35: Indicative Consolidated New Bus Stop Locations

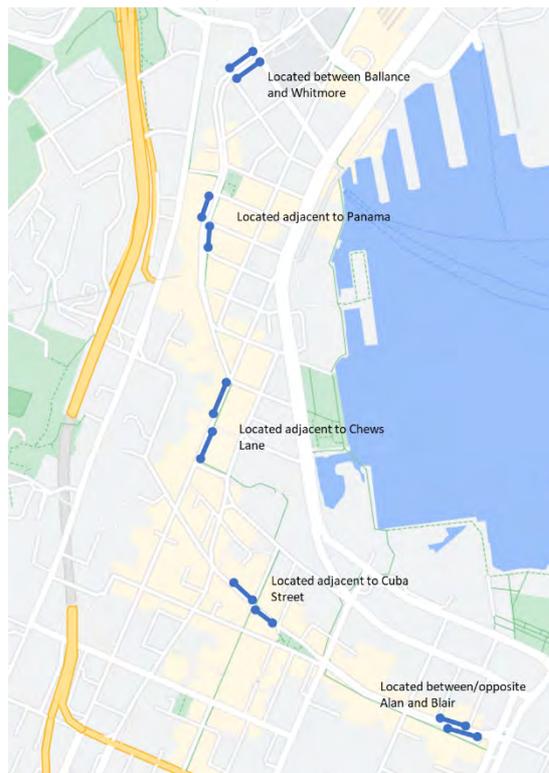


Figure 36 provides an illustrative summary of the Preferred Option.

Figure 36: Preferred Option Indicative Summary



The following interventions / features are *excluded* from the scope of the Preferred Option:

- Changes to fares and pricing structures of bus and / or taxi services

- Changes to bus fleet (including use of high-capacity buses beyond those already in use)
- Changes to bus routes, services and timetables
- The addition of new car parks outside of the Golden Mile, changes to car park pricing or parking strategies beyond the extent of the Golden Mile
- Major grade separation works and / or changes to roads or intersections beyond the extent of the Golden Mile
- Connections to and from the future MRT, and any future second public transport spine, and
- Connections to and from the LGWM City Streets project.

4.2.1 Movement and Access Strategy

To expand on the above Preferred Option Description a *Movement and Access Strategy* was developed. The purpose of this strategy was to provide further information on how the differing modes of transport would access and / or move along the Golden Mile. The Strategy is set out in full in the *Golden Mile Design Philosophy Statement* (Golden Mile DPS), which is attached as **Appendix D**.

User Groups

The first step in development of the Movement and Access Strategy was to identify each user group, and their sub-groups who would access the Golden Mile in the future. Table 28 provides a summary of the groups and sub-groups:

Table 28: Golden Mile User Group Summary

Groups	Sub-Groups	Example Users
Pedestrians	<ul style="list-style-type: none"> • Pedestrians • Use of space • Commercial Activity 	<ul style="list-style-type: none"> • Commuters • Shoppers • Homeless • Out-door dining • Buskers
Public Transport	<ul style="list-style-type: none"> • Scheduled PT • Unscheduled PT • Private mass transit 	<ul style="list-style-type: none"> • Route services • Coaches • Charters • Tourists • Special use
Personal Mobility	<ul style="list-style-type: none"> • Non-motorised • Cyclists • Motorised personal mobility 	<ul style="list-style-type: none"> • Regular users • Casual users • Commercial users/couriers
Services	<ul style="list-style-type: none"> • Emergency services • Maintenance vehicles • Enforcement vehicles 	<ul style="list-style-type: none"> • Fire/Police/Ambulance • Rubbish collection • Arborists • Water/Sewer • Security

Groups	Sub-Groups	Example Users
Loading and Commercial Vehicles	<ul style="list-style-type: none"> Large commercial vehicles Small commercial vehicles Food delivery Taxi's Rideshare 	<ul style="list-style-type: none"> Regular deliveries Irregular deliveries Trade vehicles Couriers Charities Taxi's Uber/Ola
PMVs	<ul style="list-style-type: none"> Standard cars Small vans and trucks Motorcycles Mopeds 	<ul style="list-style-type: none"> Commuters Workers/owners Residents Community transport
Special Events	<ul style="list-style-type: none"> Regular events Parades Protests Festivals 	<ul style="list-style-type: none"> Markets University parades Christmas parades Music events

Movement and Access Hierarchy

Next, the Movement and Access Strategy identified a *Movement and Access Hierarchy* in order to define the relationship between the user groups and to determine how movement and access would be prioritised. The hierarchy is shown in Figure 37 below.

Figure 37: Golden Mile Movement and Access Hierarchy



The hierarchy collectively reflects the Golden Mile's investment objectives and reinforces its function as a focal point for pedestrian activity in Wellington, as well as its role as a principal public transport spine.

Pedestrians and public transport are at the top of the hierarchy, meaning movement and access objectives should be prioritised for these groups.

Personal mobility (including cyclists) is also important, but the provision of access for these user groups should not restrict pedestrian or public transport.

Service and commercial vehicle access are necessary to maintain the functional operation of infrastructure and business along the Golden Mile.

PMVs have the lowest ranking in the hierarchy, meaning movement and access for PMVs is subservient to other user groups.

Special events have not been represented in the hierarchy, as these events have specific requirements unique to each event and will therefore be managed by a traffic management plan (TMP) process.

Strategic Access Principles

The *Strategic Access Principles* describe how the Movement and Access Hierarchy is applied to each user group. It has three fundamental principles as described in Table 29 below.

Table 29: Strategic Access Principles

Access Principle	Description
Free	Movement and access will be enabled and encouraged. Access and movement will be supported by design, with no limitations or controls placed to limit access to particular place or time
Controlled	Movement and access will be permitted; however, access and movement may be limited to particular locations, times or both
Restricted	Movement and access will be restricted from using all or part of the Golden Mile. Access may be restricted via traffic or movement controls and infrastructure design

Where a restricted strategic access principle is applied, physical and / or traffic control mechanisms may be applied to prevent access.

Where a controlled strategic access principle is applied, the specific movement and access restrictions associated with a user group will be defined and an appropriate control mechanism implemented. Examples of the application of the controlled strategic access principle include:

- **Temporal control:** limiting access to a defined period of time
- **Area control:** limiting access to a defined location or group of locations, and
- **Conditional control:** restricting access as a general principle but providing exceptions when certain conditions are met, such as, a TMP.

The determination of strategic access principles and the specific access and movement restrictions and controls will inform the development and implementation of the regulatory systems and processes needed to enact and enforce these principles.

The application of the strategic access principles to the identified user groups (as per the hierarchy above) is described in Table 30 below.

Table 30: Assigned Access Principles Summary

User Groups	Sub-User Groups	Example Users	Strategic Access Principles
Pedestrians	Pedestrians	<ul style="list-style-type: none"> • Commuters • Shoppers • Residents • Tourists • Students • Tour groups 	FREE
	Use of space	<ul style="list-style-type: none"> • PT customers • General amenity • Homeless 	CONTROLLED <ul style="list-style-type: none"> • Use of space will be encouraged at specific locations through the use of design
	Commercial Activity	<ul style="list-style-type: none"> • Charities • Fundraising • Expansion of trading areas/outdoor dining • Pop up retail activity • Busking and entertainment 	CONTROLLED <ul style="list-style-type: none"> • Use of space will be encouraged at specific locations through the use of design • May be permit controlled if required
Public Transport	Scheduled PT	<ul style="list-style-type: none"> • Scheduled Route Services 	FREE
	Unscheduled PT	<ul style="list-style-type: none"> • Demand responsive services • Roaming profile services • Long distance coaches 	RESTRICTED
	Private Mass Transit	<ul style="list-style-type: none"> • Private charter services • Tour buses • Cruise ship coach services • Special use services 	RESTRICTED
	Non-motorised	<ul style="list-style-type: none"> • Skateboards 	FREE



User Groups	Sub-User Groups	Example Users	Strategic Access Principles
Personal Mobility		<ul style="list-style-type: none"> • Push scooters • Mobility Devices 	
	Cyclists	<ul style="list-style-type: none"> • Regular cyclists • Irregular cyclists • Commercial deliveries or couriers 	CONTROLLED <ul style="list-style-type: none"> • Limited to specific locations, such as the mobility path or bus lanes
	Motorised personal mobility	<ul style="list-style-type: none"> • Power assisted cycles • Power assisted scooters • Power assisted skateboards 	CONTROLLED <ul style="list-style-type: none"> • Limited to specific locations, such as the mobility path or bus lanes
Services	Emergency services	<ul style="list-style-type: none"> • Fire/Police/Ambulance 	FREE
	Maintenance vehicles	<ul style="list-style-type: none"> • Rubbish collection • Arborists • Street cleaners • Water/sewer inspection and maintenance vehicles • Security 	CONTROLLED <ul style="list-style-type: none"> • Controlled by WCC operating agreements • May also require TMP for certain activities
	Enforcement vehicles	<ul style="list-style-type: none"> • Enforcement vehicles • Recovery and removal vehicles (tow trucks) 	CONTROLLED <ul style="list-style-type: none"> • Controlled by WCC operating agreements
Loading and Commercial Vehicles	Large commercial vehicles	<ul style="list-style-type: none"> • Regular Deliveries • Irregular Deliveries • Armoured Vehicles (cash collection etc.) • Trade vehicles • Couriers • Charities • Taxi's • Uber/Ola 	CONTROLLED <ul style="list-style-type: none"> • Access limited to time-of-day restrictions, nominally out of peak but to be confirmed



User Groups	Sub-User Groups	Example Users	Strategic Access Principles
	Small commercial vehicles	<ul style="list-style-type: none"> • Regular Deliveries • Irregular Deliveries • Trade Vehicles • Couriers • Regular 	RESTRICTED <ul style="list-style-type: none"> • Access to be provided from side roads or laneways
	Taxi's and Rideshare	<ul style="list-style-type: none"> • Standard Taxi's • Driver services • Uber/Ola etc. 	RESTRICTED Access to be provided form side road <ul style="list-style-type: none"> • Exceptions will be made for Courtenay Place during the late evening period when access and movement will be CONTROLLED
	Food Delivery services	<ul style="list-style-type: none"> • Uber eats etc. 	RESTRICTED <ul style="list-style-type: none"> • Exceptions will be made for Courtenay Place during the late evening period when access and movement will be CONTROLLED
PMVs	General	<ul style="list-style-type: none"> • Standard cars • Small vans and trucks • Motorcycles • Mopeds 	RESTRICTED
	Access to existing on-mile parking	<ul style="list-style-type: none"> • Private businesses • Residents 	CONTROLLED <ul style="list-style-type: none"> • Specific movement plans for each car park will need to be developed

Development of Movement and Access Plans

The final step in the development of the Movement and Access Strategy was to apply the strategic access principles to each user group for each section of the Golden Mile. This application enabled *Movement and Access Plans* to be developed for each section of the Golden Mile, which are summarised in Table 31 to Table 34 below.

Table 31: Lambton Quay Movement Plan

Lambton Quay Movement Plan	Key	Commentary
<p>Pedestrians</p> 	<ul style="list-style-type: none">  Primary pedestrian movement plan  Secondary pedestrian movement plan 	<ul style="list-style-type: none"> • Pedestrians will be encouraged to move freely along and to Lambton Quay • Pedestrian permeability across the corridor will also be encouraged through the provision of pedestrian controlled signals • Specific locations and configurations of pedestrian crossings will be adjusted through the design phase, and • Specific locations for stationary activities such as busking, or expansion to trading areas will be confirmed in subsequent design iterations.
<p>Public Transport</p> 	<ul style="list-style-type: none">  Scheduled Bus Movement Plans  Alternative emergency bus route 	<ul style="list-style-type: none"> • Existing scheduled public transport routes will be maintained along Lambton Quay, with operations enabled through design • All other bus services, including charters, cruise coaches etc. will be restricted • Current entry and egress points for routes will be maintained • Peak hour 'overspill' services currently right turning from Brandon to Lambton Quay will be relocated – potentially using an alternative 2nd spine bus corridor, and • Stout Street will be utilised as an emergency alternative route for buses'
<p>Personal Mobility</p> 	<ul style="list-style-type: none">  Shared Mobility Lane  Informal fast mobility connections  Primary slow personal mobility movement plan  Secondary slow personal mobility movement plan 	<ul style="list-style-type: none"> • Slow personal mobility devices, such as skateboards or push scooters will have free movement along and to Lambton Quay • Fast mobility devices, such as cyclists, e-scooters etc. will be controlled via the provision of dedicated cycle / fast mobility paths • A cycle / mobility path will be provided along Lambton Quay, extending to Panama Street, and • Connections to the cycle / mobility path will be provided informally via side roads and northbound from Lambton Quay South.
<p>Service Vehicles</p> 	<ul style="list-style-type: none">  Emergency Vehicle Mobility Plan  Service Vehicle Mobility Plan  Service Vehicle Access Points  Miscellaneous service providers 	<ul style="list-style-type: none"> • All emergency vehicles will be provided with unrestricted access to all parts of Lambton Quay • Services vehicles will be permitted access as required to undertake their duties, with access controlled by operating agreements or TMP • Access to and from Lambton Quay will be provided via major intersections, and • Enforcement and recovery vehicles will be permitted access to undertake their duties with access controlled by operating agreements.
<p>Commercial Vehicles</p> 	<ul style="list-style-type: none">  Large Commercial Vehicle Mobility Plan  Couriers and small commercial vehicles  Taxi consolidation area 	<ul style="list-style-type: none"> • Large commercial vehicles⁶³ will have access to Lambton Quay, with access limited to set time periods – nominally out of peak • Indented loading bays will be provided on both sides of the carriageway to permit loading activities without obstructing bus movements • Access to Lambton Quay will be via the remaining signalised intersections • Small commercial vehicles, including couriers will be restricted to the use of side roads, which will incorporate dedicated loading zones for this purpose • Taxi's and other commercial rideshare services will be restricted to side roads, with the potential to concentrate taxi zones at specific side roads, and • In addition, a side road⁶⁴ may be designed to accommodate large commercial vehicles to allow an alternative option for commercial vehicle access.

⁶³ The specific definition of a large commercial vehicle will be determined as part of the pre-implementation phase. As a general principle, the Golden Mile will accommodate access for those commercial vehicles that are too large to utilise side roads

⁶⁴ Specific side road for this treatment will be determined as part of detailed design

	<ul style="list-style-type: none"> PMV Restricted area PMV Access Existing private car parks 	<ul style="list-style-type: none"> PMVs will be restricted from access to and the use of Lambton Quay Access for PMVs, including pick up and drop off will be restricted to the use of side roads, and There a limited number of private car parks access only from Lambton Quay. As an access principle, access will be maintained, with the specific access control to be determined during detailed design.
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Table 32: Willis Street Movement Plan

Willis Street Movement Plan	Key	Commentary
Pedestrians		
	<ul style="list-style-type: none"> Primary pedestrian movement plan Secondary pedestrian movement plan 	<ul style="list-style-type: none"> Pedestrians will be encouraged to move freely along Willis Street Pedestrian crossings will be provided at Mercer Street and Chews Lane. The specific locations and dimensions of these crossings will be determined in detailed design There is the potential to improve signal phasing for pedestrians crossing at Willis / Willeston and Willis / Manners intersections, and Stationary activities such as busking, may only be feasible at Mercer or Bond Streets due to the constrained cross section.
Public Transport		
	<ul style="list-style-type: none"> Scheduled Bus Movement Plans 	<ul style="list-style-type: none"> Existing scheduled public transport routes will be maintained along Willis Street, with operations enabled through design All other bus services, including charters, cruise coaches etc. will be restricted, and Current entry and egress points for routes will be maintained.
Personal Mobility		
	<ul style="list-style-type: none"> Slow mobility movement plan Fast mobility movement plan 	<ul style="list-style-type: none"> Slow personal mobility devices, such as skateboards or push scooters will have free movement along and to Willis Street, and Fast mobility devices, such as cyclists, e-scooters etc. will be limited to northbound access in the bus lane only.
Service Vehicles		
	<ul style="list-style-type: none"> Emergency Vehicle Mobility Plan Service Vehicle Mobility Plan Service Vehicle Access Points Miscellaneous service providers 	<ul style="list-style-type: none"> All emergency vehicles will be provided with unrestricted access to all parts of Willis Street Services vehicles will be permitted access as required to undertake their duties, with access controlled by operating agreements or TMP Access to and from Willis Street will be provided via major intersections, and Enforcement and recovery vehicles will be permitted access to undertake their duties with access controlled by operating agreements.
Commercial Vehicles		
	<ul style="list-style-type: none"> Commercial Vehicle Restricted Area Commercial Vehicle Access 	<ul style="list-style-type: none"> All large and small commercial vehicles will be restricted from using Willis Street, and Access for commercial vehicles will be provided either by existing rear situated loading docks or through the use of side streets.
PMVs		

	<ul style="list-style-type: none"> PMV Restricted area PMV Access 	<ul style="list-style-type: none"> PMVs will be restricted from access to and the use of Willis Street, and PMVs may utilise Mercer Street for parking or pick up and drop off.
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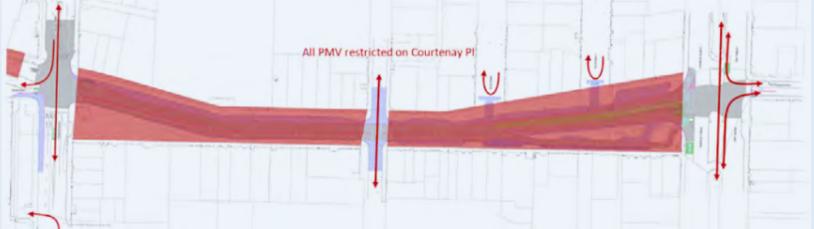
Table 33: Manners Street Movement Plan

Manners Street Movement Plan	Key	Commentary
Pedestrians		
	<ul style="list-style-type: none"> Primary pedestrian movement plan Secondary pedestrian movement plan 	<ul style="list-style-type: none"> Pedestrians will be encouraged to move freely along Willis Street Pedestrian permeability across the corridor will be provided by a combination of signalised intersection and pedestrian controlled signals Opportunities to improve pedestrian signal phasing at Willis / Manners and Victoria / Manners will be explored, and Due to the constrained cross section, there are limited opportunities to provide for stationary pedestrian activities along Manners Street.
Public Transport		
	<ul style="list-style-type: none"> Scheduled Bus Movement Plans 	<ul style="list-style-type: none"> Existing scheduled public transport routes will be maintained along Manners Street, with operations enabled through design All other bus services, including charters, cruise coaches etc. will be restricted, and Current entry and egress points for routes will be maintained.
Personal Mobility		
	<ul style="list-style-type: none"> Fast mobility restricted area Informal fast mobility connections Primary slow personal mobility movement plan Secondary slow personal mobility movement plan 	<ul style="list-style-type: none"> Slow personal mobility devices, such as skateboards or push scooters will have free movement along and to Manners Street Fast mobility devices, such as cyclists, e-scooters etc. will be restricted from using Manners Street, and The strategic cycle network has identified Dixon Street as the primary cycle corridor.
Service Vehicles		
	<ul style="list-style-type: none"> Emergency Vehicle Mobility Plan Service Vehicle Mobility Plan Service Vehicle Access Points Miscellaneous service providers 	<ul style="list-style-type: none"> All emergency vehicles will be provided with unrestricted access to all parts of Manners Street Services vehicles will be permitted access as required to undertake their duties, with access controlled by operating agreements or TMP Access to and from Manners Street will be provided via major intersections, and Enforcement and recovery vehicles will be permitted access to undertake their duties with access controlled by operating agreements.
Commercial Vehicles		
	<ul style="list-style-type: none"> Commercial Vehicle Restricted Area Commercial Vehicle Mobility Plan Couriers and small commercial vehicles 	<ul style="list-style-type: none"> All large and small commercial vehicles will be restricted from using Manners Street Access for specific large commercial vehicles will be controlled by TMP Small commercial vehicles and couriers will utilise side roads and laneways, and Large commercial vehicles may also utilise laneways, however specific traffic management may be required.
PMVs		

	<ul style="list-style-type: none"> PMV Restricted area PMV Access 	<ul style="list-style-type: none"> PMVs will be restricted from access to and the use of Manners Street, and PMVs may utilise Lower Cuba Street for parking or pick up and drop off.
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Table 34: Courtenay Place Movement Plan

Courtenay Place Movement Plan	Key	Commentary
<p>Pedestrians</p>	<ul style="list-style-type: none"> Primary pedestrian movement plan Secondary pedestrian movement plan 	<ul style="list-style-type: none"> Pedestrians will be encouraged to move freely along and to Courtenay Place Pedestrian permeability across the corridor will also be encouraged through the provision of pedestrian controlled signals, or at signal controlled intersections Specific locations and configurations of pedestrian crossings will be adjusted through the design phase, and Specific locations for stationary activities such as busking, or expansion to trading areas will be confirmed in subsequent design iterations.
<p>Public Transport</p>	<ul style="list-style-type: none"> Scheduled Bus Movement Plans 	<ul style="list-style-type: none"> Existing scheduled public transport routes will be maintained along Courtenay Place, with operations enabled through design All other bus services, including charters, cruise coaches etc. will be restricted, and Current entry and egress points for routes will be maintained.
<p>Personal Mobility</p>	<ul style="list-style-type: none"> Shared Mobility Lane Informal fast mobility connections Primary slow personal mobility movement plan Secondary slow personal mobility movement plan 	<ul style="list-style-type: none"> Slow personal mobility devices, such as skateboards or push scooters will have free movement along and to Courtenay Place Fast mobility devices, such as cyclists, e-scooters etc. will be controlled via the provision of dedicated cycle/fast mobility paths A cycle / mobility path will be provided along Courtenay Place, with a connection to Dixon Street, and Connections to the cycle / mobility path will be provided informally via side roads.
<p>Service Vehicles</p>	<ul style="list-style-type: none"> Emergency Vehicle Mobility Plan Service Vehicle Mobility Plan Service Vehicle Access Points Miscellaneous service providers 	<ul style="list-style-type: none"> All emergency vehicles will be provided with unrestricted access to all parts of Courtenay Place Services vehicles will be permitted access as required to undertake their duties, with access controlled by operating agreements or TMP Access to and from Courtenay Place will be provided via major intersections, and Enforcement and recovery vehicles will be permitted access to undertake their duties with access controlled by operating agreements.
<p>Commercial Vehicles</p>		

Courtenay Place Movement Plan	Key	Commentary
	<ul style="list-style-type: none">  Large Commercial Vehicle Mobility Plan  Couriers and small commercial vehicles  Taxi consolidation area 	<ul style="list-style-type: none"> • Large commercial vehicles⁶⁵ will have access to Courtenay Place, with access limited to set time periods – nominally out of peak, with limitations to access during peak periods of night time activity • Indented loading bays will be provided on both sides of the carriageway to permit loading activities without obstructing bus movements • Access to Courtenay Place will be via the remaining signalised intersections • Small commercial vehicles, including couriers will be restricted to the use of side roads, which will incorporate dedicated loading zones for this purpose, and • Taxi's and other commercial rideshare services will be restricted to side roads during the day.
<p>PMVs</p> 	<ul style="list-style-type: none">  PMV Restricted area  PMV Access 	<ul style="list-style-type: none"> • PMVs will be restricted from access to and the use of Courtenay Place • Access for PMVs, including pick up and drop off will be restricted to the use of side roads, and • Tory Street will remain open to general traffic, with turning to or from Courtenay Place restricted.
<p>Night Time Economy</p> 	<ul style="list-style-type: none">  Bus Services  Taxi stand and taxi movement plan  Ride share and private vehicle drop off 	<ul style="list-style-type: none"> • Scheduled late night bus services will be maintained along Courtenay Place • Taxi's and rideshare will be provided access during the eventing activity period⁶⁶ • Taxi's and rideshare will be limited to the northbound carriageway for pick up, with a temporary space for this use created in the pedestrian area, in operation for taxi's only during the evening activity period • There is also the option to utilise a circulation loop from Blair to Cambridge for taxi / uber drop offs. This option will be investigated in detailed design • Tory Street, Taranaki Street and Alan Street may also be used for taxi and rideshare access • There is the potential for the temporary holding area for taxi's to also be utilised for food pickup and delivery services during the early evening period, and • Commercial vehicle access will be restricted during the evening activity period.

⁶⁵ The specific definition of a large commercial vehicle will be determined as part of detail design. As a general principle, the Golden Mile will accommodate access for those commercial vehicles that are too large to utilise side roads

⁶⁶ Specific time periods for these activities and controls will be determined in detailed design

Further Information on the Preferred Option

Further information on the Preferred Option can be found in the Golden Mile DPS. The DPS also includes the general road arrangement plans for each section of the Preferred Option.

4.2.2 LGWM Programme Dependencies

The key LGWM Programme dependencies for delivery of the Preferred Option are set out in Table 35.

Table 35: LGWM Programme Dependencies for the Preferred Option

Programme Element	Estimated Start and Years to Complete	Links or Dependencies with the Preferred Option
Thorndon Quay and Hutt Road Improvements	Start late 2022 2 years	This project will deliver priority for buses with improvements for walking and cycling. Minimal impact , although some bus services that use Thorndon Quay and the Hutt Road will continue along the Golden Mile
Cobham Drive / SH1 Speeds	Start late 2021 1 year	This project proposes new speed limits (50km / h on Ruahine Street and 60km / h on Cobham Drive and Calabar Road) and new traffic controlled crossings on Cobham Drive (west of Troy Street). Negligible impact due to nature and locations of the projects
Central City Pedestrian Improvements	Start 2021 1 year	This project proposes to make walking safer and faster for pedestrians through adjustments to traffic signals and other minor changes to improve pedestrian safety. Minimal impact , and is consistent with the Golden Mile project
City Streets	Start 2024 3 to 10	This project involves reallocation of road space on streets in the central city outside of the Golden Mile. Significant impact , as many of these streets within scope of this project connect directly to the Golden Mile. In particular, the Preferred Option will need to be developed with a thorough understanding of the proposed provision for cyclists on parallel or intersecting streets. For example: <ul style="list-style-type: none"> • Connections from the shared path on Courtenay Place to Dixon Street and Kent and Cambridge Terraces • Connections from the shared path on Lambton Quay to each side road and onto Featherston Street, and • Alternative northbound access on Willis Street (i.e. cyclists are proposed to be located in bus lanes northbound).
MRT	Yet to be confirmed (likely to be 10 to 15 years away)	This project is to deliver an MRT system between Wellington Station and Wellington International Airport via Newtown (the final route is still to be confirmed). Significant impact , the key working assumptions for the Golden Mile Project are as follows: <ul style="list-style-type: none"> • Potential for additional pressure on the bus network during construction of MRT

Programme Element	Estimated Start and Years to Complete	Links or Dependencies with the Preferred Option
		<ul style="list-style-type: none"> • Delivery of MRT is expected to relieve pressure on bus services that operate along the Golden Mile in the years following its opening • MRT stop spacing in the central city will be at least 800m. This means that those who are unable or disinclined to walk far will need to interchange and travel for the last part of their journey on buses that operate along the Golden Mile, and • The likely need to consider or allow for a MRT / bus interchange along the Golden Mile (e.g. at Taranaki Street or at Courtenay Place).

4.2.3 Other Dependencies

The key dependencies between other projects / initiatives and the delivery of the Preferred Option are set out in Table 36.

Table 36: Other Project Dependencies with the Preferred Option

Programme Element	Scheduled Start and Years to Complete	Links or Dependencies with the Preferred Option
Pōneke Promise ⁶⁷	Start 2021 (Ongoing)	This is a project to deliver a safer central city during the day and night. It includes a community hub in the Opera House, street lighting improvements on Courtenay Place, improving the design and location of the Te Aro Park toilets, reviewing public transport night services, and proactive monitoring of the alcohol-free zones. Moderate impact. The Preferred Option's design will need to take into account the social outcomes sought by the Pōneke Promise
District Plan Review	Late 2021 1 to 4 years	WCC will be undertaking a full review of the District Plan from late 2021. It will consult on the Proposed District Plan from 2022 to 2023. Moderate impact. The Preferred Option's design will need to consider the impacts of the proposed changes to the District Plan at the relevant time
Fossil Fuel-Free Central City by 2025	Late 2021 To be confirmed	WCC has passed a motion to prepare a report to investigate a Wellington Fossil-Fuel Free Central City by 2025. The report is to be considered by WCC at the end of 2021. Moderate impact, although this could change to a Significant impact depending on the outcomes of WCC's decision

⁶⁷ See: <https://wellington.govt.nz/your-council/projects/the-poneke-promise>

Programme Element	Scheduled Start and Years to Complete	Links or Dependencies with the Preferred Option
Urban Design / Place-Making Initiatives	Ongoing	WCC are considering several urban regeneration projects as part of LGWM ⁶⁸ and a north Lambton Quay Central City Framework ⁶⁹ , some of which overlap with the Golden Mile. Moderate impact. The Preferred Option and place-making projects need to be co-ordinated to ensure that they are planned and designed holistically
Project NEXT: National Integrated Ticketing Programme	Likely from 2022 or 2023	This project will establish a nationally consistent integrated ticketing system for public transport. This system will replace the Snapper cards currently used for cashless public transport payment, which may improve the efficiency of passenger boarding and increase public transport patronage along the Golden Mile. Minor Impact. The Golden Mile (project team) may need to adapt aspects of the Preferred Option's design to ensure the public transport ticketing system can be given effect to

4.3 Economic Assessment

The economic assessment of the Preferred Option is set out in the *Golden Mile Economic Assessment Report* (Economic Assessment Report), which is attached as **Appendix E**. This report builds on the two previous economic assessments that were undertaken to inform the Short List and MCA Reports.

4.3.1 Key Parameters

Do-Minimum

The do-minimum used for the Preferred Option's economic appraisal is described in detail in the Economic Assessment Report, and can be summarised as follows:

- Traffic circulation is assumed to be the same as it currently is
- Public transport layout and priority is the same as currently, with SCATS data informing signal timing assumptions in the do minimum scenario and Snapper data informing dwell time assumptions, and
- Pedestrian layout and streetscape are the same as currently.

Economic Data and Inputs

The key economic assessment parameters used for calculating the Preferred Option's economic benefits are as follows:

- Evaluation period of 40 years and discount rate of 4%⁷⁰
- Evaluation year is the year ended June 2022

⁶⁸ \$122M budget in 10-year plan. See: <https://10yearplan.wellington.govt.nz/assets/April15docs/ee4d06f086/capital-project-budget.pdf>

⁶⁹ \$0.9M budget in 10-year plan. See: <https://10yearplan.wellington.govt.nz/assets/April15docs/ee4d06f086/capital-project-budget.pdf>

⁷⁰ These are the default assumptions in the MBCM. MRT is likely to be operational about 10 years after Golden Mile and may reduce some public transport demand for Golden Mile. However, the Golden Mile improvements are included in the do-minimum scenario for MRT, so the impacts of MRT should be captured by that business case

- Implementation (i.e. construction) is assumed to begin in the year ended June 2023 and end in the year ended June 2024
- Benefits will first be realised in the year ended June 2025, and
- Benefit values for 2020 are used.⁷¹

The key inputs into the benefit assessment calculations for the Preferred Option are set out in Table 37.

Table 37: Inputs by Mode

Input	Road Users	Public Transport Users	Pedestrians
Base demands	AIMSUN fixed demands	WPTM demands for 2013, scaled up by 25% to reflect 2018 demands	March Monitoring Counts for 2018
Mode shift demands	Elasticity-adjusted demands based on AIMSUN travel time results	Additional demand, diverted from vehicles	Elasticity-adjusted demands based on <i>Golden Mile Intercept Survey Results</i> (see the MCA Report)
Growth in demands over time	No growth	1.6% growth per year	1.3% growth per year
Travel times	AIMSUN	PT Runtime Model	Intersection delays from SIDRA
Other benefits	Emissions reduction: vehicle kilometres travelled from AIMSUN	Bus delays / queuing time: from models in <i>Bus Congestion Research</i> report	Public realm: interim guidance and preferred option concept plans
Annualisation factors	From Wellington Analytics Unit (WAU)	From WAU	From Auckland's Heart of the City counters
Value of time	From WAU	From MBCM	From MBCM

Cost Estimates

The cost estimates used for assessing the economic benefits are summarised in Table 38 below. The Financial Case (see Section 6.2) provides further information on the construction and maintenance / paver renewal cost estimates for the Preferred Option.

Table 38: Implementation Cost Estimates for the Preferred Option

	Expected Cost	95 th Percentile Cost
Preferred Option	\$84.9M	\$101.1M
Total	\$84.9M	\$101.1M

In addition to the above implementation costs, WCC's maintenance costs were determined to be \$360,000 per year (see Section 6.2).

⁷¹ The latest update factors for the MBCM values at the time of writing were for 2020

Accordingly, the *expected* implementation costs and WCC annual maintenance costs were converted into present value costs for the purposes of the economic assessment. In total, the discounted cost estimate for the Preferred Option was determined to be \$86M.

Transport Benefits Assessed

The transport benefits that have been assessed for the Preferred Option are summarised in Table 39.

Table 39: Summary of the Benefits Assessed⁷²

Impact	Description
Road user travel time impact	The road user travel time impact relates to the value of changes in vehicle travel times for car users
Emissions benefit	The emissions benefit considers the impact of changes to network-wide vehicle kilometres travelled on emissions. The emissions evaluated included carbon monoxide, carbon dioxide, nitrogen oxide and PM10 (brake and tyre)
Health benefit from mode shift (car to public transport)	The health benefit due to mode shift from cars to public transport is estimated, conservatively assuming that 20% of removed vehicle trips shift to public transport and have an associated 400m walking leg
Public transport travel time benefits	The public transport travel time benefit estimates the value of travel time savings to public transport users along the Golden Mile
Public transport reliability benefits	The public transport reliability benefit estimates the value of improved reliability for public transport users along the Golden Mile due largely to signal timing changes and reduced queuing at bus stops
Pedestrian travel time benefits	Travel time benefits for pedestrians come from removing signalised crossings of side streets <i>along the corridor</i> ⁷³
Pedestrian crash reduction benefit	Removal of traffic and street upgrades are expected to reduce the number of pedestrian crashes on the Golden Mile

⁷² Cyclist benefits have not been included in the economic assessment of the Preferred Option. This is because of the uncertainties of the current and projected demands along the Golden Mile, especially given the city centre's urban context and the high likelihood of nearby cycling projects (e.g. the City Streets project) altering the cycling network of the city centre in the near future. It is also noted that the magnitude of benefits from cyclist improvements would not be significant relative to the benefits for users of the other modes and would therefore not change the benefit assessment for the Preferred Option. The benefits are however still likely to be meaningful, particularly with the network effects of the cycling improvements anticipated by the City Streets project

⁷³ Impacts of changes to signal timings where all side streets are kept opened is not measured. Signalised crossings (e.g. mid-block crossings) across the corridor are not measured due to uncertain demands for crossing across the corridor at signalised crossings

Impact	Description
Pedestrian realm benefits	Improvements to the pedestrian environment, such as adding street trees and plantings, provides benefits to pedestrians and attracts more pedestrians than streets without such features ⁷⁴

4.3.2 Benefits Assessment

Table 40 provides a summary of the base economic assessment for the Preferred Option.

Table 40: Base Economic Assessment Summary

Cost / Benefit	Present Value (\$M)
Costs	
Construction costs	\$80
Maintenance costs	\$6
Total costs	\$86
Benefits	
Car travel time impact	-\$20
Emission reduction benefit	\$17
Health benefit from mode shift (car to public transport)	\$48
Public transport travel time impact	\$17
Public transport reliability impact	\$27
Pedestrian travel time impact	\$25
Pedestrian crash reduction benefit	\$37
Pedestrian realm benefit ⁷⁵	\$247
Total benefits	\$399
Net benefits	\$313

⁷⁴ To further expand on this benefit's description. Pedestrians are often willing to walk out of their way to travel through a more amenable environment. This additional willingness enables the benefit of pedestrian realm improvements to be valued. The process for valuing such improvements is described in Waka Kotahi's Impact on Urban Amenity in Pedestrian Environments (March 2020) technical paper. The Preferred Option includes several features which can be valued through this interim guidance. These include:

- Seating: people are willing to walk 1 per cent further if there is seating available
- Street trees or plantings: people are willing to walk up to 20 per cent further for a route that includes trees or plantings on or adjacent to the footpath. This is separated into two components, with a willingness to pay of 11 per cent for street trees and 9 per cent for 'plantings' (eg human-scale planter boxes)
- Adjacent traffic volume reduction: people are willing to walk 5 per cent further per 1000 fewer vehicles on the route, and
- Widened footpaths in crowded conditions: people are willing to walk 14 per cent further per extra metre of footpath width (capped at 56 per cent further), to walk on a wider footpath if that means the footpath is no longer 'crowded'.

⁷⁵ In summary, this benefit covers benefits to be generated by providing improved seating, increasing the number of trees / plantings, reduction in adjacent traffic volumes and widen footpaths in crowded conditions

Cost / Benefit	Present Value (\$M)
Benefit-cost ratio (base)	4.6
First year rate of return (FYRR)	0.11

4.3.3 Distribution of Pedestrian Benefits

The Economic Assessment Report identifies a street-by-street “split” for the combined pedestrian benefits (i.e. pedestrian travel times, pedestrian crash reduction and pedestrian realm benefits) for the Preferred Option as follows:

- 43 per cent of the combined benefit is on Lambton Quay
- 29 per cent of the combined benefit is on Willis Street
- 1 per cent of the combined benefit is on Manners Street, and
- 27 per cent of the combined benefit is on Courtenay Place.

4.3.4 BCR Sensitivity Tests

Table 41 presents a range of independent BCR sensitivity tests (i.e. each test varies just one assumption compared to the base economic assumptions and parameters).

Table 41: BCR Sensitivity Tests

Sensitivity Test	Benefit (\$M)	Cost (\$M)	BCR
Base BCR	\$399	\$86	4.6
Evaluation period of 13 years (ie 10 years of benefits)	\$156	\$82	1.9
Discount rate of 6 per cent	\$291	\$82	3.5
Discount rate of 3 per cent	\$475	\$88	5.4
95th percentile cost estimate	\$399	\$102	3.9
Construction delayed by two years	\$364	\$79	4.6
Low shadow price of carbon	\$393	\$86	4.6
Exclude bus queuing time benefit	\$387	\$86	4.5
Exclude pedestrian uplift elasticity	\$395	\$86	4.6
Health benefit from mode shift: include off-peak and weekends	\$443	\$86	5.2
Pedestrian realm benefit: reduce benefits by 20 per cent	\$349	\$86	4.1
Pedestrian realm benefit: exclude benefit of reduced traffic	\$182	\$86	2.1

Sensitivity Test	Benefit (\$M)	Cost (\$M)	BCR
Pedestrian realm benefit: only include the benefit of reduced traffic	\$368	\$86	4.3

For all sensitivity tests, the benefits ranged from \$156M to \$475M (net present value) with the BCRs ranging from 1.9 to 5.4.

4.3.5 Summary of the Economic Assessment

In summary:

- The base BCR for the Preferred Option is 4.6, and the first year rate of return is 0.11
- The Preferred Option is expected to generate \$399M (net present value) over the 40 year evaluation period
- Pedestrian realm benefits are the most significant benefits expected to be generated by the Preferred Option
- Most of the combined pedestrian benefits are expected to be realised on Lambton Quay, Willis Street and Courtenay Place, and
- For the BCR sensitivity tests, the benefits ranged from \$156M to \$475M (net present value) with the BCRs ranging from 1.9 to 5.4.

5 Preferred Option Outcomes and Impacts

5.1 Strategic Outcomes

This section of the report outlines the strength of the alignment of the *Preferred Option* against the updated LGWM programme objectives, the Golden Mile investment objectives as well as the key national, regional and local strategies / policies (as referenced in Section 3.4).

5.1.1 Assessment against LGWM's Programme Objectives

The assessment of the Preferred Option's alignment against the LGWM's programme objectives (as updated in June 2021) is set out in Table 42.

Table 42: LGWM Programme Objectives Alignment Assessment

Objectives (and weightings)	Objective description	Alignment Assessment Comments
Liveability (20%)	Enhances urban amenity and enables urban development outcomes	<ul style="list-style-type: none"> • The Preferred Option increases travel choices through improved public transport and active mode infrastructure to support urban amenity / development • The Preferred Option creates up to 75 per cent extra public realm space on the Golden Mile, and • The Preferred Option is predicted to have net benefits for retailers located along the Golden Mile.
Overall alignment assessment: Strong		
Access (15%)	Provides more efficient and reliable access for users	<ul style="list-style-type: none"> • The Preferred Option improves bus access (e.g. travel times and reliability) through improved public transport infrastructure • The Preferred Option improves active mode access through widen footpaths and removal of barriers

Objectives (and weightings)	Objective description	Alignment Assessment Comments
		<p>hindering walking movements (now and for predicted population increases), and</p> <ul style="list-style-type: none"> The Preferred Option improves access for cyclists and fast mobility uses through creation of new shared user facilities and reduced conflicts with PMVs. <i>(Noting that PMV access is restricted)</i>
Overall alignment assessment: Strong		
Carbon emissions and mode shift (40%)	Reduces carbon emissions and increases mode shift by reducing reliance on private vehicles	The Preferred Option will assist in reducing carbon emissions by improving public transport and active mode infrastructure (including removing PMV access from the Golden Mile), which is expected in turn to encourage mode shift from PMVs to the bus / active mode network. The Preferred Option is expected to generate about \$17M (net present value) in emission reduction benefits over 40 years, and remove 5.3 tonnes of carbon monoxide, 2.8 tonnes of carbon dioxide, 0.5 tonnes of nitrous oxide and 3.8 tonnes of PM10 emissions by 2038. ⁷⁶
Overall alignment assessment: Strong		
Safety (15%)	Improves safety for all users	<ul style="list-style-type: none"> The Preferred Option is expected to lead to a 70 per cent reduction of pedestrian crashes for the 10 years following its completion because of improved infrastructure, PMV removal and a reduced number of red-light running incidents, and The Preferred Option improves access for cyclists and fast mobility uses through creation of new shared user facilities and reduced conflicts with PMVs.
Overall alignment assessment: Strong		
Resilience (10%)	Is adaptable to disruptions and future uncertainty	<ul style="list-style-type: none"> The Preferred Option is expected to generate moderate benefits. It is not expected to generate any significant natural hazard resilience benefits. It will, however, operate in tandem with MRT and / or a second north-south bus spine, which will therefore increase the overall operational resilience of the bus network.
Overall alignment assessment: Moderate		

5.1.2 Assessment against the Golden Mile Investment Objectives

The assessment of the Preferred Option’s alignment against the Golden Mile’s Investment Objectives (as per the Strategic Case) is set out in Table 43.

⁷⁶ Economic Assessment of the Preferred Option (September 2021), page 16, Table 8

Table 43: Investment Objective Alignment Assessment

Objectives	Weighting	Alignment Assessment Comments
Improve bus travel times and travel time reliability along the Golden Mile	40%	<ul style="list-style-type: none"> • Improved bus travel times: the Preferred Option is predicted to generate about \$18M (net present value) in bus travel time benefits (e.g. between 1 to 2 minutes of bus travel time savings in the northbound direction for each person travelling on the bus), and • Improved travel reliability: the Preferred Option is predicted to generate about \$27M (net present value) in bus travel reliability benefits because of reduced bus dwelling time (through optimisation of signal timings and bus stop consolidation), removal of PMVs (and associated side friction problems) as well as a reduction in bus queuing (e.g. it is predicted that there could be a one minute reduction in delay time on Courtenay Place and Manners Street⁷⁷).
Overall alignment assessment: Strong		
Improve convenience and comfort of people waiting for, boarding and alighting buses along the Golden Mile	15%	<ul style="list-style-type: none"> • The Preferred Option is expected to result in an increase of between 25 to 50 per cent in bus stop areas, providing more space for customers.⁷⁸ Streets to have the greatest increase will be Willis Street and Courtenay Place followed by Lambton Quay.
Overall alignment assessment: Strong		
Reduce the number of crashes within the Golden Mile that result in pedestrian injury	15%	<ul style="list-style-type: none"> • The Preferred Option is predicted to generate \$37M (net present value) in pedestrian crash reduction benefits, and • The preferred option will lead to a 70 per cent reduction of pedestrian crashes for the 10 years following its implementation (that is, there were 295 crashes on the Golden Mile for the 2011 to 2020 period, however this is predicted to reduce to 88 by 2030)⁷⁹. Key reasons for crash reduction include removal of PMV conflicts, including a significant reduction in crashes from reduced red light running.
Overall alignment assessment: Strong		

⁷⁷ Ibid, page 21, Figure 2

⁷⁸ See the MCA Report, Pedestrian Capacity Report (December 2020), page 11

⁷⁹ Economic Assessment of the Preferred Option (September 2021), page 23 and page 28 (Table 14)

Objectives	Weighting	Alignment Assessment Comments
<p>Increase the capacity for pedestrians to move through the corridor by improving walking LoS along and across Golden Mile</p>	<p>15%</p>	<ul style="list-style-type: none"> • The Preferred Option is predicted to generate \$25M (net present value) in pedestrian travel time benefits • It is forecasted that improved pedestrian travel times will be due to closure of side road ends and optimised traffic signal timings. For example, pedestrian travel times are expected to reduce by a collective 240 hours per day due to closure of the ends of Stout Street, Brandon and Mercer Streets⁸⁰ • It is estimated that there could be between 10 to 25 per cent improvement in pedestrian LoS from increased pedestrian density (with the greatest LoS improvement occurring on Willis Street and Lambton Quay)⁸¹. Increased pedestrian density will help to reduce the number of people stepping out onto the road carriageway, and • The Preferred Option is expected to increase bus stop density on the Golden Mile by between 25 to 50 per cent, which will help to improve pedestrian through movements at bus stops.⁸²
<p>Overall alignment assessment: Strong</p>		
<p>Improve the place quality of the Golden Mile</p>	<p>15%</p>	<ul style="list-style-type: none"> • The Preferred Option is expected to generate nearly \$247M (net present value) in pedestrian realm benefits from: <ul style="list-style-type: none"> ○ People walking to the Golden Mile due to more seating being available ○ People walking further because they enjoy walking along routes with trees / plantings on or adjacent to the footpath ○ People walking further because there will be significantly fewer PMVs to avoid on the route, and ○ People are willing to walk further for improved footpath capacity. • The Preferred Option is also expected to create 75 per cent more public realm space on the Golden Mile, resulting in: <ul style="list-style-type: none"> ○ Increased composition (e.g. character): side street closures will encourage people to spend more time on Courtenay Place and Lambton Quay⁸³ ○ Improved comfort (e.g. habitable areas): there will be opportunities to make greater use of available sun light in public spaces on Courtenay Place and Lambton Quay. Safety perceptions will improve as there will be greater separation from vehicles⁸⁴ ○ Improved connectedness (e.g. ease of access across): access will improve through removal of

⁸⁰ Ibid, page 26, Table 13

⁸¹ See the MCA Report (Appendix F), Pedestrian Capacity Report (December 2020), page 5

⁸² Ibid, page 11

⁸³ See the MCA Report (Appendix G), Urban Amenity Report, (December 2020)

⁸⁴ Ibid

Objectives	Weighting	Alignment Assessment Comments
		PMVs and reduced traffic lanes on Lambton Quay, Courtenay Place and Willis Street, and ⁸⁵ <ul style="list-style-type: none"> ○ Increased activation space for retailers / hospitality: this space can be utilised for trade on Lambton Quay and Courtenay Place.⁸⁶
Overall alignment assessment: Strong		

5.1.3 Alignment with key National Transport Strategies and Policies

The assessment of the Preferred Option’s alignment against key national transport strategies is set out in Table 44.

Table 44: National Transport Strategies and Policies Alignment Assessment

Strategy / Policy	Alignment Assessment Comments
Government Policy Statement on Land Transport 2021	<ul style="list-style-type: none"> • Safety: the Preferred Option is expected to lead to a 70 per cent reduction of pedestrian crashes for the 10 years following its completion because of improved infrastructure, PMV removal and a reduced number of red-light running incidents • Better travel choices: the Preferred Option will improve bus travel times and reliability, passenger convenience and active mode LoS. Such improvements will increase travel choices for the central city and Wellington • Improving freight connections: the Preferred Option has weak benefits for freight connections. Freight provision will be provided on side roads, and larger freight movements are to be catered for on the Golden Mile at certain times, and • Climate change: the Preferred Option will assist in reducing carbon emissions by improving public transport and active mode infrastructure (including removing PMV access from the Golden Mile), which is expected in turn to encourage mode shift from PMVs to the bus / active mode network. The Preferred Option is expected to generate about \$17M (net present value) in emission reduction benefits over 40 years, and remove 5.3 tonnes of carbon monoxide, 2.8 tonnes of carbon dioxide, 0.5 tonnes of nitrous oxide and 3.8 tonnes of PM10 emissions by 2038.
Overall alignment assessment: Strong	
Arataki – Waka Kotahi’s 10-year plan	<ul style="list-style-type: none"> • Improve urban form: the Preferred Option will significantly improve pedestrian LoS and the central city’s public realm (by creating new pedestrian space to dwell). Bus improvements will support WCC’s Spatial Plan’s objectives of keeping the city compact and accessible • Transform urban mobility: the Preferred Option will improve bus services and active mode infrastructure (including the removal of PMVs), which will encourage mode shift away from PMVs • Significantly reduces harm: the Preferred Option is expected to lead to a 70 per cent reduction of pedestrian crashes for the 10 years following its completion because of improved infrastructure, PMV removal and a reduced number of red-light running incidents • Tackle climate change: the Preferred Option will assist in reducing carbon emissions and harmful emissions by improving public transport and active mode infrastructure (including removing PMV access from the Golden Mile),

⁸⁵ Ibid

⁸⁶ Ibid

	<p>which is expected in turn to encourage mode shift from PMVs to the bus / active mode network. The Preferred Option is expected to generate about \$17M (net present value) in emission reduction benefits over 40 years, and remove 5.3 tonnes of carbon monoxide, 2.8 tonnes of carbon dioxide, 0.5 tonnes of nitrous oxide and 3.8 tonnes of PM10 emissions by 2038, and</p> <ul style="list-style-type: none"> • Support regional development: the Preferred Option will support WCC's Spatial Plan by encouraging and supporting people to live, play and work in the central city through improved public transport and active mode infrastructure.
<p>Overall alignment assessment: Strong</p>	
<p>Waka Kotahi New Zealand Transport Agency Road to Zero 2020 – 2030</p>	<ul style="list-style-type: none"> • Infrastructure improvements and speed management: the Preferred Option will provide significantly improved active mode facilities when compared to the existing situation (it is noted that the speed limit has already been reduced to 30km / h) • Vehicle safety: this outcome is not directly applicable to the Preferred Option's objectives • Work-related road safety: this outcome is not directly applicable to the Preferred Option's objectives • Road user choices: the Preferred Option will significantly increase public transport, active mode and fast mobility travel choices through improved infrastructure for these modes, and • System management: this outcome is not directly applicable to the Preferred Option's objectives
<p>Overall alignment assessment: Moderate</p>	

5.1.4 Alignment with key Regional Transport Strategies and Policies

The assessment of the Preferred Option’s alignment against key regional transport strategies is set out in Table 45.

Table 45: Alignment with key Regional Strategies and Policies

Strategy / Policy	Alignment Assessment Comments
Wellington Regional Land Transport Plan 2021	<ul style="list-style-type: none"> • Public transport capacity: the Preferred Option seeks to improve the efficiency of bus movements along the Golden Mile by improving infrastructure, which will in turn have efficiencies for the wider bus network • Travel choice: the Preferred Option seeks to improve public transport and active mode options and pedestrian safety, which in turn increases travel choices • Strategic access: the Preferred Option seeks to improve public transport along the Golden Mile, thereby improving access to and from regional destinations such as the Wellington Station • Safety: the Preferred Option is expected to lead to a 70 per cent reduction of pedestrian crashes for the 10 years following its completion because of improved infrastructure, PMV removal and a reduced number of red-light running incidents, and • Resilience: the Preferred Option is expected to generate moderate benefits. It is not expected to generate any significant natural hazard resilience benefits. It will, however, operate in tandem with MRT and / or a second north-south bus spine, which will therefore increase the overall operational resilience of the bus network.
Overall alignment assessment: Strong	
GWRC Local Term Plan	<ul style="list-style-type: none"> • Fresh water quality and biodiversity: this outcome is not directly applicable to the Preferred Option’s objectives • Water supply: this outcome is not directly applicable to the Preferred Option’s objectives • Regional resilience: the Preferred Option will generate weak regional resilience benefits, and • Public transport: the Preferred Option will generate strong public transport benefits.
Overall alignment assessment: Moderate	
Wellington Regional Public Transport Plan 2021-2031	<ul style="list-style-type: none"> • Increase public transport and active transport mode share: the Preferred Option provides significantly improved bus network and active mode infrastructure to encourage mode shift from PMVs to more sustainable travel choices • Reduce public transport emissions by accelerating decarbonisation of the public transport vehicle fleet: this outcome is not directly applicable to the Preferred Option’s objectives, and • Improve customer experience across all aspects of the network: the Preferred Option will provide greater choice and flexibility for journey planning, improved accessibility of public transport and improved bus shelters.
Overall alignment assessment: Strong	

Strategy / Policy	Alignment Assessment Comments
Wellington Regional Growth Framework	<ul style="list-style-type: none"> • Increase housing supply, and improve housing affordability and choice: this outcome is not directly applicable to the Preferred Option's objectives • Enable growth that protects and enhances the quality of the natural environment and accounts for a transition to a low / no carbon future: the Preferred Option will assist transitioning to a low / no carbon future by improving public transport and active mode infrastructure (including removing PMV access from the Golden Mile), which is expected in turn to encourage mode shift from PMVs to the bus / active mode network • Improve multi-modal access to and between housing, employment, education and services: the Preferred Option will optimise the capacity of the existing Golden Mile corridor. It will improve public transport and active mode access to the Wellington CBD and Wellington Train Station (and will have wider network benefits) • Encourage sustainable, resilient and affordable settlement patterns / urban form that make efficient use of existing infrastructure and resources: the Preferred Option will support intensification plans for the Wellington CBD by making use of existing infrastructure • Build climate change resilience and avoid increasing the impacts and risks from natural hazards: the Preferred Option will have moderate benefits. It does not generate significant natural hazard resilience benefits, but it does seek to reduce carbon emissions and harmful emissions through improved public transport / active mode infrastructure, and • Create employment opportunities. the Preferred Option will have moderate benefits. The Preferred Option has no specific employment objectives, however it will improve worker access to Wellington's CBD for public transport and active mode users.
Overall alignment assessment: Moderate	

5.1.5 Alignment with key Local Policies and Strategies

The assessment of the Preferred Option's alignment against key local transport strategies is set out in Table 46.⁸⁷

Table 46: Alignment with key Local Strategies and Policies

Strategy / Policy	Alignment Assessment Comments
Wellington Urban Growth Plan 2014-2043	<ul style="list-style-type: none"> • A compact city: the Preferred Option seeks to support WCC urban intensification objectives for the Wellington CBD • A liveable city: the Preferred Option seeks to improve liveability through improved public transport, active modes and public spaces. It is also expected to generate significant health benefits as a result of mode shift from cars to public transport. In total, the Preferred Option is expected to generate \$48M (net present value) in health benefits • A city set in nature: the Preferred Option seeks to significantly increase public open spaces in the central city, and • A resilient city: the Preferred Option will have moderate benefits. The Preferred Option does not seek to improve the resilience of the city against

⁸⁷ It is noted that the Pōneke Promise and Fossil Fuel Free CBD projects were not assessed as they have yet to be sufficiently developed to enable an alignment assessment to be undertaken

Strategy / Policy	Alignment Assessment Comments
	the risk of natural hazards, but it does seek to support making emission reductions.
Overall alignment assessment: Strong	
Our City Tomorrow: Spatial Plan for Wellington City	<ul style="list-style-type: none"> • Compact: the Preferred Option will provide public transport and active mode choices that will build on the city’s existing layout • Resilient: the Preferred Option will encourage physical activity through improved active mode connections, and will support the roll out of the Pōneke Promise, which is a social resilience project • Vibrant and prosperous: the Preferred Option will have moderate benefits. The Preferred Option does not seek to provide specific social outcomes, but does provide opportunities to enhance the culture and heritage of the Wellington CBD • Inclusive and connected: the Preferred Option will significantly improve the public transport and active mode networks in central Wellington, and provide significantly more public spaces • Greener: the Preferred Option will significantly increase the number of public open spaces in the central city, and • In partnership with mana whenua: the Preferred Option is expected to provide opportunities to recognise and protect the importance of the Golden Mile / Te Aro Pa for mana whenua.
Overall alignment assessment: Strong	
WCC Long Term Plan	<ul style="list-style-type: none"> • A functioning, resilient and reliable three waters infrastructure: this outcome is not directly applicable to the Preferred Option’s objectives • Wellington has affordable, resilient and safe housing: this outcome is not directly applicable to the Preferred Option’s objectives • The city’s core transport infrastructure is a safe, resilient, reliable network that supports active and public transport choices, and an efficient, productive and an environmentally sustainable economy: the Preferred Option will have strong public transport and active mode benefits as well as health benefits • The city has resilient and fit-for-purpose community, creative and cultural spaces: the Preferred Option will have strong benefits as it will create new public open spaces • An accelerating zero-carbon and waste free transition: the Preferred Option will assist in reducing carbon emissions and harmful emissions by improving public transport and active mode infrastructure (including removing PMV access from the Golden Mile), which is expected in turn to encourage mode shift from PMVs to the bus / active mode network. The Preferred Option is expected to generate about \$17M (net present value) in emission reduction benefits over 40 years, and remove 5.3 tonnes of carbon monoxide, 2.8 tonnes of carbon dioxide, 0.5 tonnes of nitrous oxide and 3.8 tonnes of PM10 emissions by 2038, and • Strong partnerships with mana whenua: the Preferred Option is expected to provide opportunities to recognise and protect the importance of the Golden Mile / Te Aro Pa for mana whenua.
Overall alignment assessment: Strong	

Strategy / Policy	Alignment Assessment Comments
WCC District Plan (i.e. the eight principles for the Central Area)	<ul style="list-style-type: none"> • Enhance ‘sense of place’: the Preferred Option will have strong benefits as it will create opportunities to strengthen the Golden Mile’s sense of place and create new public open spaces • Sustain the physical and economic heart of the Central Area: the Preferred Option will generate positive impacts for Golden Mile retailers (i.e. increased footfall from widened footpaths and dedicated active mode space is predicted to increase sales and revenue) • Enhance the role of the ‘Golden Mile’ and ‘Cuba’: the Preferred Option will be designed to enhance the economic, physical, historic and cultural dimensions of the Golden Mile • Enhance the Central Area as a location for high quality inner city living: the Preferred Option seeks to improve liveability through improved public transport, active modes and public spaces • Enhance the built form of the Central Area: the Preferred Option will be designed to enhance the built form of the Golden Mile • Enhance the quality of the public environment: the Preferred Option seeks to improve the quality of the public environment through improved public transport services, new active mode facilities and new public spaces. It is also expected to generate significant health benefits as a result of mode shift from cars to public transport. In total, the Preferred Option is expected to generate \$48M (net present value) in health benefits • Enhance city / harbour integration: the Preferred Option will enhance the city through improved public transport services, new active mode facilities and new public spaces, and • Enhance the sustainability of the Central Area: the Preferred Option will enhance sustainability through improved public transport services, new active mode facilities and new public spaces.
Overall alignment assessment: Strong	
Wellington Towards 2040: Smart Capital	<ul style="list-style-type: none"> • Eco city: the Preferred Option seeks to improve public transport and active mode choices to encourage mode shift away from PMVs • Connected city: the Preferred Option will optimise the capacity of the existing Golden Mile corridor to improve public transport and active mode access to the Wellington CBD and Wellington Train Station (and will have wider network benefits) • People-centered city: the Preferred Option will improve public transport, active mode infrastructure and provide more / enhanced public spaces (which will improve / enhance the Golden Mile’s sense of place), and • Dynamic central city: the Preferred Option will increase the number of public open spaces.
Overall alignment assessment: Strong	
Te Atakura First to Zero: Wellington City’s Zero Carbon Implementation Plan 2020-2030	<ul style="list-style-type: none"> • Transportation: the Preferred Option will improve public transport and active mode infrastructure, which will in turn encourage mode shift away from PMVs (the majority of which are fossil fuel-powered). The Preferred Option is expected to generate about \$17M (net present value) in emission reduction benefits over 40 years, and remove 5.3 tonnes of carbon monoxide, 2.8 tonnes of carbon dioxide, 0.5 tonnes of nitrous oxide and 3.8 tonnes of PM10 emissions by 2038. • Building energy and urban form: this outcome is not directly applicable to the Preferred Option’s objectives

Strategy / Policy	Alignment Assessment Comments
	<ul style="list-style-type: none"> • Advocacy: this outcome is not directly applicable to the Preferred Option's objectives, and • The Council itself: this outcome is not directly applicable to the Preferred Option's objectives.
Overall alignment assessment: Strong	
WCC Walking Policy 2008	<ul style="list-style-type: none"> • To promote the benefits of walking so that more people walk: The Preferred Option will generate strong pedestrian travel time, safety and public realm benefits as well as health benefits • To improve pedestrian safety throughout the city: the Preferred Option will generate strong pedestrian safety. The Preferred Option is predicted to generate \$37M (net present value) in pedestrian crash reduction benefits • To improve the experience of those walking through or about the Central Area: the Preferred Option will generate strong pedestrian travel time, safety and public realm benefits for those walking through or about the Golden Mile • To increase the number of commuter trips taken by foot to and from the Central Area: the Preferred Option will put in place the necessary pedestrian infrastructure to cater for increase pedestrian demand as population, employment and inner city living increases in the future • To improve the experience of those walking to and from public transport stops: the Preferred Option is expected to result in an increase of between 25 to 50 per cent in bus stop areas, providing more space for customers • To increase the number of short walking trips to and from Suburban Centres: this outcome is not directly applicable to the Preferred Option's objectives, and • To increase the number of walking trips made to and from educational centres and the regional hospital: this outcome is not directly applicable to the Preferred Option's objectives.
Overall alignment assessment: Strong	
WCC Parking Policy 2020	<ul style="list-style-type: none"> • Facilitate a shift to using active (eg, walking and cycling) and public transport through parking management and pricing, to move more people driving fewer vehicles: the Preferred Option will improve public transport and active mode infrastructure, which will in turn encourage mode shift away from PMVs • Facilitate the safe and efficient movement of people and goods by focusing on people moving along transport corridors rather than people parking or storing stationary vehicles: the Preferred Option focuses on encouraging people to move along the Golden Mile corridor via public transport and / or active modes. Supporting this focus is the removal of PMVs, on-street parking from the Golden Mile and the relocation of most loading bays to side roads (with the exception of "larger delivery vehicles"). • Ensure parking management and pricing controls support economic activity in the central city, suburban centres and mobile: this outcome is not directly applicable to the Preferred Option's objectives • Ensure on-street parking design and placement supports overall city amenity, safety, community building, heritage, creative arts, good urban design outcomes and attractive streetscapes: the Preferred

Strategy / Policy	Alignment Assessment Comments
	<p>Option provides a significant opportunity to reallocate space along the Golden Mile to achieve these amenity outcomes</p> <ul style="list-style-type: none"> • Ensure disabled people, older people, people who are pregnant, and people with babies can access the city, Council facilities, and venues, achieved, in part, through an improvement in mobility parking across the city: the Preferred Option will significantly improve access to the Golden Mile for public transport and active mode users, and proposes to increase the number of available disability parks on side roads • Facilitate the uptake of car sharing, electric vehicles and other transport with low carbon emissions: the Preferred Option will improve public transport and active mode infrastructure, which will in turn encourage mode shift away from PMVs to other transport modes with low carbon emissions, and • Provide a high standard of customer service for people who use Council parking spaces to support users to make well-informed parking decisions: this outcome is not directly applicable to the Preferred Option's objectives.
Overall alignment assessment: Strong	

5.1.6 Proposed Investment Prioritisation Method Profile

Waka Kotahi uses the Investment Prioritisation Method (IPM)⁸⁸ to prioritise transport investments under the National Land Transport Programme (NLTP) 2021 to 2024. The IPM assessment process considers the following three assessment factors:

- **GPS Alignment:** indicates the alignment of a proposed activity or combination of activities with the GPS's strategic priorities
- **Scheduling:** indicates the criticality or interdependency of the proposed activity with other activities in a programme or packages, or as part of a network, and
- **Efficiency:** indicates the expected return on investment and considers the whole of life costs and benefits through cost-benefit analysis.

Table 49 sets out a proposed IPM assessment for the Preferred Option for further consideration by LGWM.

Table 47: Proposed GPS Alignment Profile

GPS Strategic Priorities	Proposed Assessment	Proposed Golden Mile Rating
Safety	The Preferred Option targets a low collective risk corridor to achieve a DSI reduction of >5 per cent over a 5-year period	Low
Better Travel Options and Climate Change	The Preferred Option will remove PMVs from the Golden Mile, resulting in a >6 per cent change in the share of private passenger vehicle-based trips	Very High

⁸⁸ See: [Investment Prioritisation Method for the 2021–24 National Land Transport Programme \(nzta.govt.nz\)](https://nzta.govt.nz)

Better Travel Options	The Preferred Option introduces new public transport and active mode infrastructure that will deliver better travel choices for accessing the Wellington CBD. This new infrastructure will also support the predicted population and employment growth for the Wellington CBD with improved (and sustainable) travel choices	High
Improving Freight Connections and Climate Change	The Preferred Option does not address a priority route for freight	n/a
Improving Freight Connections	The Preferred Option does not address a priority route for freight	n/a
Climate Change	The Preferred Option will deliver improved public transport and active mode infrastructure, including removing PMVs from the Golden Mile. These interventions will in turn encourage mode shift from PMVs to more sustainable forms of transport. Accordingly, a >10 per cent reduction in carbon vehicle emissions is expected	Very High
Overall Alignment with GPS Priority⁸⁹	Very High ratings were recorded for Better Travel Choices and Climate Change and Climate Change	Very High

Table 48: Proposed Scheduling Assessment

Scheduling Priority	Proposed Assessment	Proposed Golden Mile Rating
Interdependency	The Preferred Option forms part of the wider LGWM programme, and its delivery over the NLTP 2021 to 24 period is required to enable the full implementation of the wider programme	High
Criticality	The Preferred Option is needed to deliver the wider LGWM Three-Year Programme, which is programme for delivery in the NLTP 2021 to 24 period	High
Overall Scheduling Assessment	The recommended option demonstrates a High rating for both interdependency and criticality	High

Table 49: Proposed Efficiency Rating

Efficiency rating	Proposed Assessment	Proposed Golden Mile Rating
Efficiency Rating	The Preferred Option has a BCR of 4.6 (putting it between the IPM's BCR range of 3 and 5.9)	Medium

⁸⁹ Where an activity contributes to more than one GPS strategic priority, the rating is assigned based on the highest expected contribution to a single GPS strategic priority

Although the final IPM profile ranking for the Golden Mile Project will ultimately be determined at a LGWM programme level, a preliminary IPM profile has been developed for the preferred option to help inform future rating / ranking decision-making processes as set out in Table 50 below.

Table 50: Proposed IPM Profile

Factor	Proposed Golden Mile Rating
GPS alignment	Very High
Scheduling	High
Efficiency	Medium

5.1.7 Summary

In summary, the Preferred Option:

- Will deliver strongly on the LGWM programme objectives
- Will fully deliver on all of the Golden Mile investment objectives
- Is aligned with key national, regional and local strategies and policies assessed, and
- Could achieve a IPM rating of Very High for GPS alignment, High for scheduling, and Medium for Efficiency.

5.2 Preferred Option Impacts

This section of the report summarises some of the Preferred Option’s impacts that have been identified through development of the SSBC, including:

- Traffic effects
- Retail impacts, and
- Construction impacts.

Other impact assessments have been undertaken to inform the development of the Golden Mile DPS, including:

- Social effects
- Crime Prevention through Environmental Design
- Climate change risk and adaptation assessment and climate change risk, and
- Safety Audit and Network Functionality Assessment.

These assessments are summarised in the Golden Mile DPS.

5.2.1 Transport Effects

A *Golden Mile Traffic Assessment Report* (Traffic Effects Report) was prepared to inform the assessment of the proposed changes anticipated by the Preferred Option, and is attached as **Appendix F**.

The Traffic Effects Report summarises the transport modelling undertaken to understand the potential traffic effects of restricting access to the Golden Mile for general traffic.

The Traffic Effects Report identified that traffic volumes on the Golden Mile are low in comparison with parallel routes to / through the central city. It is expected however that traffic restrictions needed to support the implementation of the Preferred Option will result in behaviour change. For example, for some people that currently drive, they can expect:

- Changing where they park
- Changing the time of day when they drive
- Changing the route, they choose to reach their destination, or
- Changing the way in which they travel.

The traffic effects have been modelled using the Ngauranga to Airport AIMSUN and SIDRA modelling software. This “modelling package” has provided sufficient resolution to forecast traffic effects and to show how motorists are likely to change their routes in response to the proposed network changes. This software is however not able to forecast potential changes to parking location, time of day or mode choice.

The traffic effects have been forecast for two alternative scenarios:

- A worst-case demand scenario where traffic demand does not change and all motorists continue to travel as they do today, and
- An optimistic demand scenario where some people that currently drive adjust their behaviour in response to the changes proposed by the Preferred Option.

The optimistic demand scenario was forecast by adjusting the transport modelling minimum demands using empirical relationships evidenced from studies in New Zealand and validated against overseas studies. This work found that the changes to the Golden Mile should result in a reduction in network-wide traffic volumes of between 1.3 and 2.2 per cent. This reduction in traffic demand is triggered by an increase in average travel times for some journeys.

The Traffic Effects Report recommended that both scenarios should be treated as “bookends” with the ‘more plausible’ scenario being somewhere between the two, but in any event advised that the network could accommodate the changes that are proposed by the Preferred Option under the worst-case scenario. However, the report did identify the following locations and intersections where small adverse impacts for traffic could be expected:

- Featherston Street southbound
- Ghuznee Street eastbound and its intersections with Willis, Victoria and Taranaki Streets, and
- The intersection between Taranaki Street and Wakefield Street.

The increases in traffic flow on Featherston Street are similar to the current flow for each direction on Lambton Quay. It is expected that some of the motorists that currently drive southbound on Lambton Quay will divert onto Featherston Street. The closure of side road intersections on Lambton Quay will mean that more traffic will use Featherston Street instead of driving round the block using Lambton Quay. It is likely however that some motorists travelling to destinations on Lambton Quay will choose more accessible parking places and walk to their destination.

The increase in eastbound traffic flow on Ghuznee Street is created by the traffic restrictions to Willis Street northbound. Currently people driving from Brooklyn, Aro Valley,

Highbury and Kelburn may drive to destinations in the northern parts of the central city via Willis Street. The proposed traffic restrictions mean that they must instead use Taranaki Street, Jervois and Waterloo Quays to access these parts of the central city.

The effects of the diverted traffic and increased delays at intersections will be lessened where there is a reduction in demand. Changes to the operation of intersections that are used by traffic diverting around Lambton Quay and Willis Street will help to further mitigate these adverse effects.

Travel times on the main traffic routes within the city are expected to increase by only a small amount because of the proposed changes to the Golden Mile. The largest increase in travel times is for journeys between Highbury or Kelburn and the central city. People who currently drive via Willis Street will instead need to travel via Ghuznee and Taranaki Streets adding up to five minutes to their journey by car. This additional travel time is expected to be realised if there is little or no change to travel behaviour.

It is expected that the changes to the transport system will cause some people to change where they park, when or how they travel. This change in the use of the transport system would reduce traffic demand and minimise the increase in travel times.

5.2.2 Retail Impacts

As noted above in Section 4.1.4, during the Golden Mile Public Engagement Programme 2020, LGWM received feedback from the retail and hospitality sectors that the short-listed options would impact negatively on their businesses. A key concern raised by retailers was that the removal of on-street car parking from the Golden Mile (and a reduction in on-street car parking from the relevant side streets) would negatively affect their businesses. They were also concerned that there was a general trend in car parking reduction in the Wellington CBD.

As documented in the MCA Report, a Retail Impact Assessment was undertaken as part of the MCA process. This assessment comprised of the following:

- **Market assessment:** an assessment of the current state of the Golden Mile retail precinct and retail market. The analysis applied a “real estate lens” to understand current market activity including:
 - Current market rents, lease demand, growth rates, vacancy rates and tenancy trends
 - Benchmarking of income / return metrics against other comparable NZ retail precincts
 - Understanding current trends and forecasting future trends, and
 - Discussions with leasing agents in the Wellington City market to understand critical retail market drivers.
- **Research:** an assessment of local and international case studies to identify the benefits, risks, and impacts to retailers assuming the proposed street scape improvements are completed
- **Parking impacts report:** this report estimated the impact of parking removal on retail spend under several scenarios. The evaluation drew from EFTPOS spending data and the Golden Mile Intercept Survey to understand the existing conditions of the Golden Mile. It also included elements of the design options to estimate potential outcomes under each of the proposed options for the Golden Mile

- **Golden Mile Intercept Survey to inform the parking impacts report:** this survey investigated customer travel and behaviour patterns and took place on the Golden Mile over nine days in November and December 2020, capturing over 2000 responses, and
- **Walking the Golden Mile:** this involved collecting data on retailer types, counts, vacant properties, parking availability and side street retailers.

The retail impact assessment ultimately concluded that Option 3 (i.e. the Preferred Option) would have the largest net benefits for retailers as the positive impacts (i.e. from increases in footfall from widened footpaths and dedicated active mode space would lead to increased sales and revenue) were likely to outweigh the negative impacts (i.e. the removal of general traffic, parking and closure of side streets).

Further information on the retail impact assessment can be found in the MCA Report.

5.2.3 Construction Impacts

The Consenting Strategy (discussed further below in Section 7.4) identifies the following construction related effects:

- Construction / implementation of the works is to be located within legal road
- No private property is required for the works
- Construction / implementation of the works is to be located within the legal road
- No private property is required for the works
- Key construction activities involve construction of:
 - New kerb / channels (including earthworks)
 - New pavement areas (including earthworks)
 - Streetscaping (including new trees, potential rain gardens)
 - Above and below ground service relocations
 - Installation of new bus shelters
 - Possible modification (e.g. pruning) of existing trees, and
 - Re-routing of bus services during construction.
- Potential effects on the environment include:
 - Noise / vibration and dust from construction activities
 - General disruption for local community and businesses
 - Potential disturbance of contaminated land
 - Potential accidental archaeological discoveries
 - Impacts on existing underground services, and
 - Temporary changes to bus routes.
- There are a number of heritage buildings, sites and objects located along the Golden Mile, including:
 - The Wellington Harbour pre-1855 Wairarapa earthquake shoreline is located on, near or along the Golden Mile streets (e.g. it runs along the Lambton Quay Alignment)
 - The former Te Aro Pa and associated settlement are located in Te Aro Park (and surrounds). Te Aro Park is located on the corner of Manners / Dixon Streets, and

- Maori Site Points 66 (Kumutoto Kainga) and 68 (Waitangi Lagoon) are also of significance for mana whenua.

As discussed below, the consenting strategy identifies that these issues will need to be further explored in the pre-implementation phase.

6 Financial Case

This section of the report sets out the following:

- The approach to clarifying the affordability of the LGWM wider programme, and what elements are to be funded by the LGWM partners, and
- Project whole-of-life costs for the Preferred Option.

6.1 LGWM Programme Funding

Following significant public engagement, the LGWM Programme Business Case developed a vision for Wellington and a Recommended Programme of Investment (RPI) to support the delivery of the vision.

Following the development of the RPI in October 2018, the programme completed financial analysis to understand if the full RPI was affordable in the medium term. The analysis showed the full RPI was not affordable in the medium term. While the full programme was supported as a long-term vision, it would need to be staged, with only the first stage having committed funding.

Following discussion between the funding partners and the Crown, an Indicative Package (IP) of work was developed for the first stage. This IP represented a \$3.7B capital investment and a \$6.4B funding requirement including operating and financing costs (before accounting for council financing costs) over 30 years.

In March 2019 the IP was endorsed by Cabinet and in May 2019 the IP was announced by the Minister of Transport supported by the Mayor of WCC and the Chair of GWRC.

The March Cabinet paper anticipated detailed business cases would be developed. It made a range of assumptions which would need to be explored in more detail through the subsequent phases including:

- A cost share of 60 per cent for central government and 40 per cent for local government
- The central government share was anticipated to come from the NLTF
- Financing was anticipated for the MRT project, and
- NLTF funding projections included petrol excise duty and road user charges increasing broadly in line with inflation over the next 30 years.

6.1.1 Funding Partner Affordability

LGWM is a step change in transport for Wellington and represents a major investment for all three funding partners. Due to the scale of the programme and other financial pressures facing the partners it is anticipated affordability will need to be reassessed at each phase as the programme progresses. This will take advantage of the improved understanding of the benefits and costs of the programme as it matures.

The following outlines the approach to the key financial arrangements for the LGWM programme as it prepares to move forward to the next phase.

- Financing

The LGWM programme is not the only funding pressure LGWM partners have. Therefore, (funding) partners will need to make wider decisions about their cashflow and financing.

For the projects within the Three-Year Programme (such as the Golden Mile Project), a central financing mechanism operated by the LGWM programme is not intended to be used. This may be revisited as the LGWM programme progresses through later phases.

Therefore, the funding required from each funding partner will be provided, and it will be up to the relevant partner to then determine their own financing arrangements for managing their required cashflows (if required).

It is expected that both WCC and GWRC will debt fund the next phase of the LGWM programme, and Waka Kotahi will use the NLTF on a pay-go-basis.

- Funding

The LGWM programme has completed a comprehensive inventory of funding tools in use across the world. This includes funding tools which fall under the broad categories of “value capture” and “user charging”.

Any use of new funding tools would need to go through the appropriate approvals and in some cases legislative change. No decisions about any potential new funding tools are expected through the business case phase. It is expected further investigations into new funding tools will occur ahead of the start of construction of higher cost components of the programme as part of clarifying the level of spend the funding partners can commit to.

Both council partners have included funding for the next phases of work expected over the next few years in their long-term plans using their existing rating tools.

Waka Kotahi is expected to fund the central government share from the NLTF for the next phase of work. This funding requirement is expected to be included in the NLTP.

- Funding Partner Cost Shares

Project costs need to be allocated to funding partners including to WCC and GWRC (which was not determined at the IP stage). This allocation sets out what each funding partner must fund and over what period. Cost shares may vary by phase (business case development, implementation and on-going).

The final decision on cost allocation, across the programme, has not yet been made.

There is an explicit LGWM programme work stream to provide funding partners with analysis to assist them in agreeing the more enduring agreement for cost allocation. That analysis and partner agreement is expected to be developed once preferred package options have been identified and using the analysis from the business cases.

This cost allocation is expected to consider the implications for various groups including who benefits and who should bear costs.

For the next phase of work, the LGWM programme will use the interim agreed funding arrangement documented in schedule 5 of the 2020 LGWM Relationship and Funding agreement to allocate cost shares to funding partners.

6.2 Project Cost Estimates

Cost estimates for the Preferred Option are documented in the *Golden Mile Cost Estimate Report* (Cost Estimate Report), which is attached as **Appendix G**. As noted in

Section 8.6 below, a separate parallel estimate was prepared by WT Infrastructure (which is appended to the Cost Estimate Report in Appendix G). It is noted that there were no material cost item variances between the two estimates.

In summary, the cost estimation methodology used a bottom-up approach, whereby an estimate of material quantities has been generated based on the Golden Mile General Arrangement Plans (see the Golden Mile DPS in Appendix D).

Table 51 below provides a high-level summary of the base estimate.

Table 51: Summary of the Base Estimate for the Preferred Option

Phase	Base Estimate	Notes
Property	\$0M	No private property required (all works to be located within legal road)
Investigations	\$0M	Relates to this SSBC. Treated as a sunk cost
Design and project development	\$7.2M	Includes consultancy fees and LGWM managed costs
Monitoring, MSQA, Client Managed Cost and Consent Monitoring Fees	\$8.8M	Includes consultancy fees, LGWM managed costs and physical work costs
Physical works	\$48.9M	Includes environmental compliance, earthworks, ground improvements, drainage, pavement and surfacing, traffic services, services relocation, landscaping and urban design, traffic management and temporary works, preliminary and general and extraordinary construction costs
Total	\$64.9M	

The base, expected and the 95th percentile cost estimates for the Preferred Option are summarised in Table 52 below. It is noted that the contingency and funding risks applied to the expected and 95th cost ranges are premised on the LGWM contingency and funding risk allowance approach.⁹⁰

Table 52: Summary of the Cost Estimates for the Preferred Option

	Base	Expected	95 th percentile
Preferred Option	\$64.9M	\$84.9M	\$101.1M

⁹⁰ This approach applies the following to the expected and 95th cost estimates (see Section 10 of the Cost Estimate Report for further information):

- Contingency of 30% for all items
- 95th percentile estimate is 50% over the base for all items except for service relocations, and
- 95th percentile estimate for service relocations is 100% over the base.

Assumptions

The key *assumptions* from the Cost Estimate Report are summarised as follows:

- **Only limited design to price:** the costs are based on the limited design undertaken for the SSBC. As such, there is uncertainty regarding quantities and rates (and therefore overall costs). This current uncertainty has been reflected in the assessment of contingency and funding risk allowances
- **Extent and quality of streetscape improvements:** the design of the streetscape improvements is limited at this point in time. Changes to the extent and quality of the streetscape improvements is highly likely through the pre-implementation phase (e.g. as a consequence of community engagement). Therefore, any significant changes to the current streetscape assumptions underpinning the cost estimates (above) may have a notable impact on the final cost estimate
- **Uncertainty over extent of underground service relocations:** the SSBC has confirmed that there are many underground services located within the existing footpath and road carriageway, however exact locations and depths have yet to be confirmed. An improved understanding of the extent of the underground service relocations needed will be developed during the pre-implementation phase. However, at this point in time it is considered that an allowance of \$7.5M should be included in the base estimate to reflect the associated cost uncertainty
- **Construction methodology:** the costs estimated for the proposed construction methodology are based on the methodology identified in the Golden Mile DPS (and as replicated in the Cost Estimate Report). It is noted that construction phasing of the Preferred Option is expected to be complex, and the final methodology will be further refined during the pre-implementation phase. Additional refinements to the methodology may have an impact on the final cost of the Preferred Option, and
- **Approach to identifying rates:** rates have been estimated from a variety of sources including tender costs from other projects, advice from other parties and estimates from first principles.

Exclusions

The key *exclusions* from the Cost Estimate Report are summarised as follows:

- GST
- Escalation beyond the time the estimate was prepared, namely 2nd Quarter 2021
- Sunk costs, includes those costs associated with this SSBC and engagement activities
- Operational and maintenance costs once the Golden Mile Project is constructed, and
- Operational costs from other organisations such as Metlink / GWRC (e.g. changing bus timetables, temporary diversion notifications). However, it should be noted some physical infrastructure costs have been included for bus stops including shelters, totem signs and real time information signs).

6.3 Annual Cash Flow Costs

Based on the Base Estimate, the anticipated cash flows for the Preferred Option's pre-implementation and implementation phases are set out in Table 53 below.

Table 53: Golden Mile Annual Project Cash Flow

Phase	Annual Cashflow				
	2021/22	2022/23	2023/24	2024/25	Total
Pre-implementation	\$2.2M	\$5M			\$7.2M
Implementation		\$7.7M	\$25M	\$25M	\$57.7
Total	\$2.2M	\$12.7M	\$25M	\$25M	\$64.9M

6.4 Maintenance Costs

As noted above, maintenance costs have been excluded from the base cost estimate. However, an estimate of WCC’s maintenance costs has been recorded here for completeness (as well as for informing the Preferred Option’s BCR).

WCC Existing Costs

WCC’s existing maintenance costs are provided in Table 54 below:

Table 54: Existing Maintenance Costs

	Average Cost (per annum)	Comments
Paver replacement	\$560,000	Based on average quantities from 2016 to 2020 (2,500m ²) using current contract rates
Cleaning	\$130,000	Based on average costs from 2016 to 2020
Dispatches⁹¹	\$350,000	Based on average costs from 2016 to 2020 (excluding external projects)

Paver Maintenance Costs

The Preferred Option includes the addition of significant quantities of new pavers. The current clay pavers used along the Golden Mile have a short life and are a significant maintenance cost (as shown in Table 54 above). Table 55 below identifies the expected change in annual costs associated with the Preferred Option will be approximately \$360,000.

Table 55: Paving Replacement Costs

Type	Area ⁹²	Paver life	Paver replacement cost (per m ²)	Area renewed (p.a.)	Average maintenance cost (p.a.)
New clay paving	11,400	7	\$220	1630	\$360,000
Net change	11,400	-	-	-	\$360,000

⁹¹ Dispatches includes all other maintenance not mentioned above including, surfacing, streetlights, seats etc

⁹² Excludes new areas of cycleway or landscaping

Other Maintenance Costs

As identified above in Table 55, there are approximately \$480,000 of other maintenance costs per annum currently incurred along the Golden Mile.

An overview of the dispatch types indicates that approximately 60 per cent of the value of dispatches are road carriageway related and that approximately 40 per cent of the value of dispatches are footpath / streetscape related.

The Preferred Option reduces carriageway areas by approximately 40 per cent, but increases footpath / streetscaping areas by approximately 50 per cent.

Applying the relative change in areas to the relative value of dispatches indicates that the overall value of dispatches is expected to remain largely unchanged (i.e. road carriageway related costs decrease by a similar amount to the increase in footpath / streetscape related costs).

As a result, no net change in *other* maintenance costs is expected.

Overall Net Change

The net change in maintenance costs for WCC is expected to increase by approximately \$360,000 per annum.

7 Commercial Case

The commercial case outlines the following:

- The scope of the pre-implementation and implementation phases
- The proposed procurement arrangements for the pre-implementation and implementation phases, and
- The key recommendations of the consenting and traffic regulations strategies.

Following approval of this SSBC, the next immediate phase of the Golden Mile Project will be the pre-implementation (i.e. detailed design) phase, which is programmed for commencement in late 2021. The implementation (i.e. construction) phase is currently programmed for a start in late 2022 or early 2023 and is expected to take about two years to complete.

7.1 Pre-Implementation Phase Scope

Table 56 provides a summary of the key activities to be undertaken in the pre-implementation phase.

Table 56: Summary of Pre-Implementation Phase Activities

Pre-Implementation Phase	Key activities	Indicative Timing
<p>Develop Design Phase</p>	<p>Key Tasks:</p> <ul style="list-style-type: none"> • Project team mobilisation and meet / greet LGWM and mana whenua • Undertake gap analysis • HSID, risk, CPTED and accessibility workshops • Confirm integrated design CAD workflow and design documentation outputs • Build 3D models and agree common platform for sharing digital data • Flood modelling • Integrated services design • Update topographical survey • Traffic signal (detailed) modelling • Public realm contextual analysis (e.g. character, microclimate, cultural / heritage mapping, ecology, activities) • Develop diagram overlays to inform public realm design • Confirm 2D alignment and stormwater strategy, and • Streetscape materiality and pavement assessment with WCC and mana whenua. <p>Key Deliverables:</p> <ul style="list-style-type: none"> • Updated DPS • Public realm masterplan, developed design report and updated general arrangement plans • Visualisations and 3D axonometric views • Updated cost estimate • Updated construction methodology / staging plan • Confirm approach to any required resource consents, and • Decisions register. 	<p>Late 2021 to early 2022</p>

Pre-Implementation Phase	Key activities	Indicative Timing
<p>Initial Design</p>	<p>Key Tasks:</p> <ul style="list-style-type: none"> • Integrated civil, transport and public realm designs for pavement and kerbs, materiality, drainage, stormwater, street furniture, structures, integrated cultural design and artworks, lighting and power supply • Tree planting identified • Services design / coordination with utility services • Road signs and marking plan • Traffic signals plan • Standard departures report • Finalise Metlink bus structure requirements • Create principal quantity schedule for each corridor • Update vehicle movement, access, servicing, parking and traffic calming plans • Active mode transport plan • Public realm activation and event programming • Seek consents and other authorisations • Finalise design model • Road safety and CPTED audits <p>Key Deliverables:</p> <ul style="list-style-type: none"> • Updated general arrangement plans • Construction detail drawings and specifications • Updated cost estimate • Confirm construction / staging plan • Assist LGWM develop (implementation) procurement plan and processes 	<p>Early 2022 to mid / late 2022</p>
<p>Final Design, Traffic Resolution Process and Contract Documentation</p>	<p>Key Tasks:</p> <ul style="list-style-type: none"> • Prepare final documents and material schedules • Complete traffic resolution processes, and • Complete (implementation) contract documentation. 	<p>Late 2022</p>



Pre-Implementation Phase	Key activities	Indicative Timing
Community and Stakeholder Engagement	As set out below in Section 8.3 below.	Late 2021 to late 2022

7.2 Implementation (Construction) Phase Scope

It is envisaged at this point in time that the physical works to implement the Preferred Option will include (at a minimum):

- Kerb and channel realignments, including enabling / establishment / decommissioning works (with the majority of works proposed for Lambton Quay and Courtenay Place)
- New pedestrian and cycle pavement areas
- Streetscape works, including possible works on existing trees
- Modifications or new bus shelter installations
- Modifications and / or signalised intersections and pedestrian crossings
- Various above and below ground service re-locations
- Drainage and stormwater management activities
- Streetlighting installation, and
- Liaison with public.

7.2.1 Construction Staging

The Golden Mile DPS provides an outline of a possible construction staging approach, which is summarised below:

- Stage 1: Improvements at intersections
- Stage 2: Manners Street as follows:
 - Close Cuba Street and reconfigure as two-way cul-de-sac
 - Divert southbound buses via Mercer Street, Wakefield Street to Taranaki Street and make changes to Manners Street, and
 - Remove diversion.
- Stage 3: Willis Street as follows:
 - Buses via Victoria Street and make changes to Willis Street and Willeston Street (removes access to Lambton Quay northbound for general traffic), and
 - Remove diversion
 - Close Willis Street to general traffic and make changes to Boulcott Street intersection
 - Close Mercer Street and reconfigure as two-way cul-de-sac, and
 - Divert southbound.
- Stage 4: Lambton Quay
 - Divert southbound buses via Panama Street and make changes to Lambton Quay between Panama and Hunter Streets
 - Divert northbound buses via Customhouse Quay and make changes to Lambton Quay between Hunter and Willis Streets
 - Close side streets that enter onto Lambton Quay (except for property access) and reconfigure as two-way cul-de-sacs (can be staged)

- Close Lambton Quay to general traffic, make temporary changes to Whitmore Street intersection and reconfigure side roads that exit from Lambton Quay (except for property access) and reconfigure as two-way cul-de-sacs (can be staged)
- Make changes to southern carriageway (northbound direction) on Lambton Quay between Whitmore and Panama, and
- Divert southbound buses to new route and make changes to northern carriageway (southbound direction) on Lambton Quay between Whitmore and Panama.
- Stage 5: Courtenay Place
 - Close side streets (except for property access) and reconfigure as two-way cul-de-sacs or through access only (can be staged)
 - Close Courtenay Place to general traffic, make temporary changes to Taranaki and Cambridge intersections
 - Remove median and surface (except where trees are to be retained)
 - Shift lanes to south side and make changes to northern side of Courtenay Place, and
 - Shift lanes to north side and make changes to southern side of Courtenay Place.

It is noted that alternative approaches to construction phasing are possible, and could result in different access and detour arrangements. Accordingly, further construction phasing investigations will be a key early focus of the pre-implementation phase.

7.3 Procurement Strategy

The procurement for the Golden Mile Project is based on LGWM's Three-Year Programme Procurement Strategy, which has been developed by LGWM's Procurement Team. A key focus of the current procurement approach is to ensure the pre-implementation phase progresses with speed, so the LGWM programme timeline can be met.

7.3.1 Pre-Implementation Phase

In accordance with LGWM's Procurement Strategy, the preference of procurement pathway options is to look to vary existing contracts where services are similar, prior to approaching the market.

The right to vary subsequent phases was signalled in the original SSBC contract. Based on the performance to date, LGWM will be enacting this clause to vary the next phase to FutureGroup, led by Stantec, subject to acceptable pricing and key personnel.

WCC will be the Procuring Party and Principal for the pre-implementation contract.

The key tasks to be delivered by FutureGroup have been outlined in Table 56 above.

7.3.2 Implementation Phase

An initial assessment of delivery models indicates the project will likely be delivered via a variant of the Early Contractor Involvement (ECI) model. Suppliers will be selected based on quality and price through the Price Quality Method.

7.3.3 Operational Procurement

The Preferred Option will require new traffic controls to be put in place, and new CCTV cameras may be required. It is proposed that any technology required to support access restrictions to the Golden Mile, will be included in WCC's upcoming traffic enforcement technology procurement process that is expected to be completed within the next 18 months.

7.3.4 Potential for Risk Sharing during Pre-Implementation

The likely risk sharing arrangements between the future professional service provider and LGWM have been identified in Table 57 below.

Table 57: Pre-implmentation Phase Risk Sharing Arrangements

Risk	Comment	Risk Allocation
Integration with other LGWM projects like City Streets and MRT and WCC's Wellington Fossil-Fuel Free Central City plan	There is a risk that LGWM will be making decisions on City Streets and MRT during the Golden Mile's pre-implementation phase that will require redesign works. WCC's Wellington Fossil-Fuel Free Central City plan may also propose changes that will require redesign	LGWM risk
Identifying the location of underground services and underground obstructions	There is a high degree of uncertainty in the location of underground services. Given that there will always be a level of uncertainty, any changes in design due to relocating or protecting unknown services would add to implementation costs	Possible risk sharing. Actual risk to be determine following completion of LGWM's underground investigations
Three-Waters Renewals, Repairs, Capital Forward Works, Growth Planning Programme for Golden Mile	While Wellington Water have identified their current works programme for the CBD in WCC's Long Term Plan (2021), they have only recently initiated work to scope their (unfunded) "Growth Planning Programme". This programme may identify new renewal works within the Golden Mile, resulting in rework of designs in the future	Shared risk. Access to WCC's Forward Works Viewer (FWV) to identify what conflicts exist will be provided to the supplier (and therefore should be known to the supplier). Any new work that is not identified in the FWV will be a LGWM risk
Building projects which interface with the Golden Mile	There are numerous buildings which interface directly with the Golden Mile streetscape. Building projects can have direct or indirect impacts for the design process, resulting in rework of designs in the future	Shared risk. Access to FWV to identify what conflicts exist will be provided to the supplier (and therefore should be known to the supplier). Any new work that is not identified in the FWV will be a LGWM risk
WCC minor changes to local roads outside of the Golden Mile footprint but which impact design	WCC likely to be undertaking continuous minor changes to local roads outside of the Golden Mile footprint that may have indirect impacts on design. Any changes can have direct or indirect impacts for the design process, resulting in rework of designs in the future	Shared risk. Access to FWV to identify what conflicts exist will be provided to the supplier (and therefore should be known to the supplier). Any new work that is not identified in the FWV will be a LGWM risk
Changes as a result of the Pōneke Promise	Design changes may be required as a result of projects delivered from the Pōneke Promise (for example initiatives to make Te Aro Park safer). Implementation of the Pōneke Promise could have direct or indirect impacts for	Shared risk. Ongoing access to Pōneke Promise project will be provided to identify / avoid / manage potential conflicts (and therefore should be known to the supplier). Any new work that is not identified

Risk	Comment	Risk Allocation
	the design process, resulting in rework of designs in the future	through project / Pōneke Promise collaboration to occur during the Developed Design Phase will be a LGWM risk
Traffic resolution process delays	Any design changes or delays to design programme that result from the public consultation on proposed Traffic Resolutions would add costs	LGWM risk
Covid-19 elevation back to Level 3 or 4	If Alert levels increase back to 3 or 4 there would be an impact on site-based activities that are deemed non-essential which would result in overall design programme delays	LGWM risk

7.4 Consenting Strategy

A *Golden Mile Consenting Strategy* is attached as **Appendix H**. This strategy sets out the key considerations under the Resource Management Act 1991 (RMA) for obtaining the necessary authorisations for the Preferred Option. It also identifies what other statutory authorisations might be required.

All authorisations are recommended to be obtained during the pre-implementation phase.

Key Consenting Issues

The Preferred Option has been developed to a technical standard suitable for a SSBC. Based on the available technical information the key consenting issues identified are as follows:

- Construction / implementation of the works is to be located within the legal road
- No private property is required for the works
- Key construction activities involve construction of:
 - New kerb / channels (including earthworks)
 - New pavement areas (including earthworks)
 - Streetscaping (including new trees, potential rain gardens)
 - Above and below ground service relocations
 - Installation of new bus shelters
 - Possible modification (e.g. pruning) of existing trees, and
 - Re-routing of bus services during construction.
- Potential effects on the environment include:
 - Noise / vibration and dust from construction activities
 - General disruption for local community and businesses
 - Potential disturbance of contaminated land
 - Potential accidental archaeological discoveries
 - Impacts on existing underground services, and
 - Temporary changes to bus routes.
- There are a number of heritage buildings, sites and objects located along the Golden Mile, including:
 - The Wellington Harbour pre-1855 Wairarapa earthquake shoreline is located on, near or along the Golden Mile streets (e.g. it runs along the Lambton Quay Alignment).
 - The former Te Aro Pa and associated settlement are located in Te Aro Park (and surrounds). Te Aro Park is located on the corner of Manners / Dixon Streets, and
 - Maori Site Points 66 (Kumutoto Kainga) and 68 (Waitangi Lagoon) are also of significance for mana whenua.
- The Preferred Option's pre-implementation phase (to commence from December 2021) will provide refined detailed design information, including confirming final construction / implementation requirements, and
- Construction / implementation is expected to commence in late 2022 or early 2023.

Key Recommendations

The Consenting Strategy recommends the following:

- As the physical works needed to implement the Preferred Option are likely to be authorised under the Local Government Act 1974, it is unlikely that there will be a need to make use of the notice of requirement / designation planning instrument under the RMA
- Based on the WCC District Plan's Central Area, Public Open Space and Heritage provisions, it appears that the Preferred Option works would be a permitted activity, subject to construction activities meeting the relevant standards
- Further consideration of compliance with the relevant standards (e.g. the Heritage Area earthworks standards, and earthworks within Contaminated Land) needs further detailed design, and therefore cannot be gauged until the pre-implementation phase has commenced and / or site investigations have been completed (e.g. HAIL activities). It is noted that non-compliance is likely to require discretionary (restricted) consents. However, if physical works activities are ultimately considered a permitted activity, then consideration should be given to obtaining a certificate of compliance
- It is highly likely that a general Archaeological Authority (Form A) will be required by Heritage New Zealand Pouhere Taonga (Heritage NZ). This application will need to be informed by a detailed cultural and heritage impact assessment in the first instance
- All works around trees located on WCC land must comply with WCC's standard tree protection conditions. It is noted that any proposal to remove a Heritage / Notable Tree⁹³, partially or completely, or to build, do earthworks or any other work in a Heritage / Notable Tree's root zone, will require a resource consent, and
- Maintaining a watching brief of the WCC District Plan Review process to be undertaken in 2022 / 2023.

Key Priorities for the Pre-Implementation Phase

The following key steps are recommended as a priority for the pre-implementation phase:

- Undertake an archaeological assessment to inform preparation of a general authority application to Heritage NZ during the early stages of the pre-implementation phase, and allow sufficient time within the programme to secure this authorisation
- Consider whether HAIL detailed investigations are required during the early stages of the pre-implementation phase
- Progress the pre-implementation phase to a point where sufficient design has been undertaken to inform an assessment of the Preferred Option's compliance with the Central Area Zone, Open Space A Zone, Heritage Zone and Contaminated Land provisions as soon as practicable, and
- Progress the pre-implementation phase to a point that is sufficient for a New Zealand Arboricultural Association-approved contractor to assess whether works will be in compliance with WCC's standard tree protection condition.

7.5 Property Acquisition Plan

There is no private property required for the Preferred Option. Accordingly, and for avoidance of doubt purposes, no Property Plan has been prepared for this SSBC.

⁹³ It is noted that there are no Heritage Trees listed in the WCC District Plan that are located on the Golden Mile

7.6 Traffic Control Regulations Strategy

The *Golden Mile Traffic Regulations Strategy* (Traffic Regulations Strategy) is attached as **Appendix I**.

The Strategy identifies that WCC has the power to make traffic bylaws relating to any of its roads under the Land Transport Act (LTA) 1998. The purpose of a traffic bylaw is to regulate the activities that take place on road reserves in order to protect, promote and maintain public health and safety and protect the public from nuisance, harm and to minimise the potential for offensive behaviour preventing the wellbeing and enjoyment of the public using the road.

The traffic bylaw sets the requirements for parking and control of vehicles or other traffic on any road owned or managed by WCC, including the Golden Mile. This includes the ability to:

- Create parking meter areas and restricted parking zones
- Specify times for parking, set parking fees
- Provide information about parking such as using signs and road markings
- Establish the council mechanism for making decisions; by council resolution and the processes required, and
- A list of offences.

Wellington City Council Traffic and Parking Bylaw 2021

The WCC Traffic and Parking Bylaw 2021 (Bylaw) is made pursuant to section 22AB of the LTA. In addition, traffic and parking issues are also regulated and controlled by other Policies, Acts and Regulations. This includes the WCC Parking Policy 2020, the Land Transport (Road User) Rule 2004 and the Local Government Act 1974.

Bylaw 2021 allows WCC by resolution to permit, prohibit, limit, restrict, or control on any specified road or portion of road, or any land owned or controlled by Council and not being a road or part of a road.

Any resolutions under this Bylaw may:

- Control access in respect of a specified class, type or description of vehicle, and may be revoked or amended by WCC
- Be expressed or limited to apply only on specified days, or between specified times, or in respect of specified events or classes of events or be limited to specified maximum periods of time
- Where appropriate, prescribe, abolish or amend fees, whether annual, hourly or otherwise, as WCC may reasonably require for any parking space, parking area, building, transport station, or restricted parking area; and may prescribe the methods of displaying appropriate receipts for payments, or other authority to use or park in such spaces, buildings or areas
- In respect of any resolution made in terms of this Bylaw, specify a minimum number of occupants in any PMV, and
- Be made in respect of any defined part of a road, including, any defined footpath, carriageway or lane.

Access Control Options

To regulate the access into the Golden Mile, three main methods were considered in the Traffic Regulations Strategy:

- Road traffic controls (e.g. signs, signals and road markings)
- Physical access controls (e.g. gates, barriers and bollards), and
- Permitting system: this would allow permit holders who meet WCC requirements in relation to road use, vehicle class, type or travel time period to access the corridor (e.g. buses, emergency vehicles, service vehicles, taxis and ride share vehicles which travel at a certain time period).

The Traffic Regulations Strategy assessed the pros and cons of each of the above options in conjunction with WCC and LGWM, and ultimately concluded that a hybrid approach involving a combination of Road Traffic Controls and a Permitting System was likely to be the most effective solution for supporting the implementation of the Preferred Option.

Traffic Control Strategy

The Traffic Regulations Strategy includes a high-level *traffic control strategy* that is recommended to be followed in order for the design of the Preferred Option to be implemented and enforceable. The key objectives of the control strategy are:

- Confirm the timeframe of the traffic resolution process for the Golden Mile improvements
- Confirm how the design process will provide the information required for traffic resolutions, and
- Identify key risks to the traffic resolution process.

The traffic control strategy recommends that the traffic resolution process commence towards the end of the Detailed Design Phase component of the pre-implementation phase (which is likely to be from June 2022). However, it does recommend that the communications / engagement and design approach to be undertaken for the Develop Design Phase be cognisant of the traffic resolution process. That is, this engagement will help to lay the foundation for the required formal public consultation that will occur during the traffic resolution process from June 2022.

The traffic control strategy recommends that four separate Traffic Resolution Reports be prepared for each section of the Golden Mile (i.e. Lambton Quay, Willis Street, Manner Street and Courtenay Place). Taking this reporting approach will help to reduce processing risks (e.g. the risk of one or several design elements at a particular location holding up the approval of the entire project).

Finally, the strategy recommends involving WCC traffic control officers early in the pre-implementation phase. Early involvement will help to streamline the process as the proposed traffic resolution reports navigate their way through the WCC internal approval process prior to reaching WCC's Regulatory Processes Committee.

8 Management Case

The purpose of the management case is to describe the arrangements to be put in place for the successful delivery of the Preferred Option, with a particular focus on the pre-implementation phase. It includes who has responsibility for project delivery and how scope changes and risks will be managed.

8.1 Key Project Milestones

Key project milestones for delivery of the Preferred Option are summarised in Table 58.

Table 58: Key Project Milestones

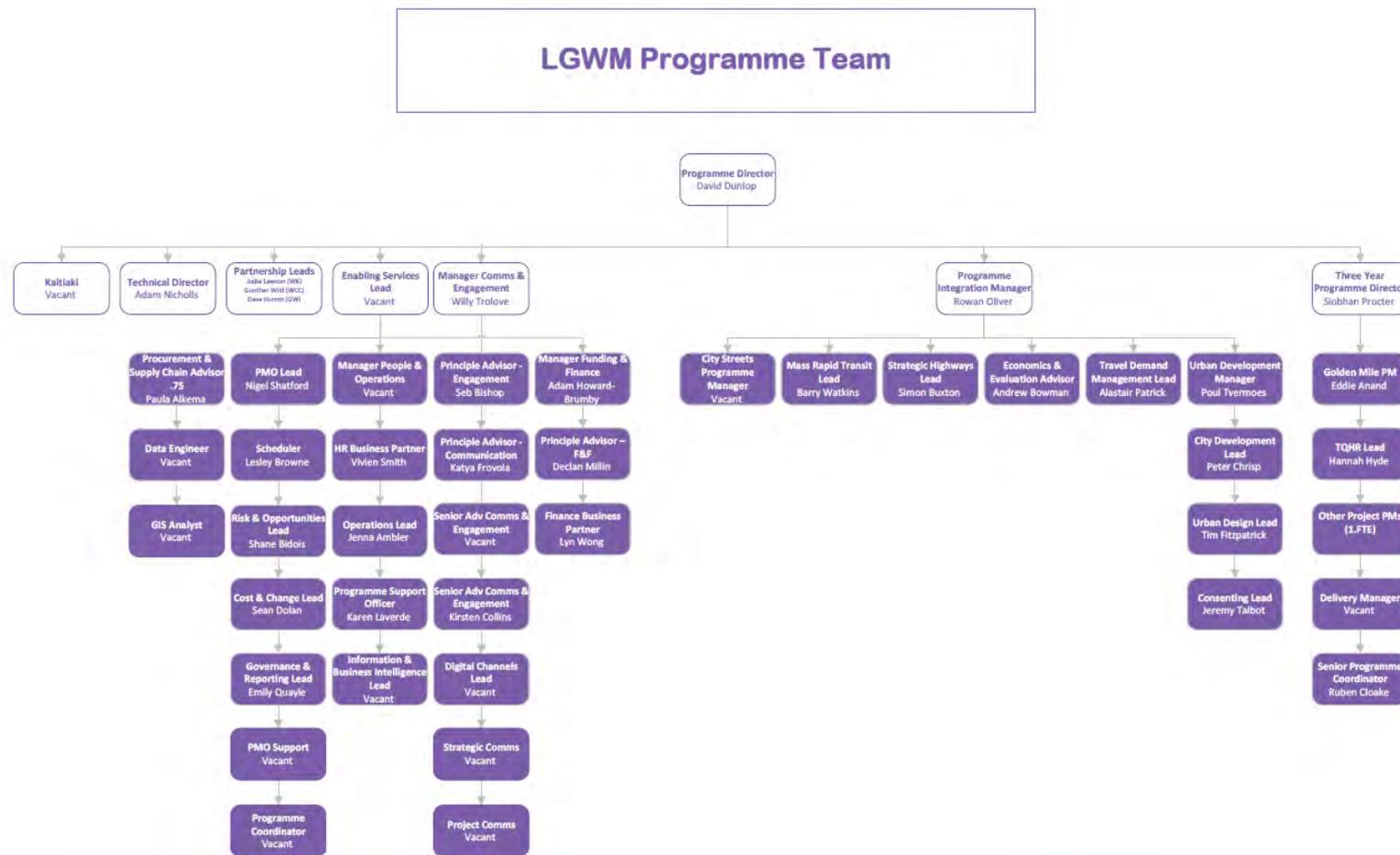
Key milestones	Estimated Timing
SSBC approved	November 2021
Pre-implementation	December 2021
Implementation procurement	Mid to late 2022
Implementation commences	Late 2022 / early 2023
Implementation completed	2025

It is important to recognise that the Golden Mile Project is part of a staged programme of works or packages to be delivered over the short term (i.e. the Three-Year Programme), and over the longer term (e.g. MRT). As discussed further below in Section 8.4, the timing and delivery of some of these packages could have a direct impact on the timing of the above key project milestones.

8.2 LGWM Governance and Management

LGWM's programme team structure is set out in Figure 38 below.

Figure 38: LGWM Programme Team Structure



Project Roles and Responsibilities

The LGWM Three-Year Programme Director is responsible for overseeing the delivery of the Three-Year Programme.

The Golden Mile Project Manager will report to the LGWM Three-Year Programme Director. The current Golden Mile Project Manager will be responsible for the delivery of the pre-implementation phase. Project management responsibility will then be handed over to a Golden Mile Delivery Manager (yet to be confirmed) for the implementation phase.

Issues Management

Issues and risks are proposed to be managed through the *Golden Mile Project Risk Register*. The Project Manager will update project issues and risks weekly with the top issues and risks to be reported monthly to the LGWM Three-Year Programme Director. Issues and risks which have a high impact and high likelihood of occurring will be reported to the LGWM Three-Year Programme Director in the first instance.

Change Control

Any change in the scope of the project is to be managed by the Project Manager and reported through to the LGWM Three-Year Programme Director (and to the LGWM Board if appropriate). It is recommended that a change control register be established for the Golden Mile Project to ensure that interdependencies of changes are managed appropriately. Change will be managed within an understanding of the tolerances of the project (related to funding, scope, risk, quality and benefits).

A *LGWM Change Control Register* should sit alongside the risk register and be managed by the Project Manager. Any significant risks that are likely to result in a change in the scope of the Golden Mile, including adjustments to costs, programme and quality will be subject to the approval of the LGWM Board (and its delegations).

Reporting Arrangements

In summary, the Golden Mile Project's reporting requirements for the pre-implementation and implementation phases will include the following:

- Monthly reporting on:
 - Project progress
 - Costs (actuals and forecasts)
 - Risks (including mitigations)
 - FTE (actual and forecasted)
 - Health and safety performance, and
 - Other information requested by LGWM Board and Partners.
- Quarterly reporting on:
 - Costs (actuals and forecasts)
 - Progress towards outcomes being delivered
 - Progress towards project completion dates, and
 - Media marketing and communications activities.
- Post implementation reporting, including reporting on the Benefits Management Plan

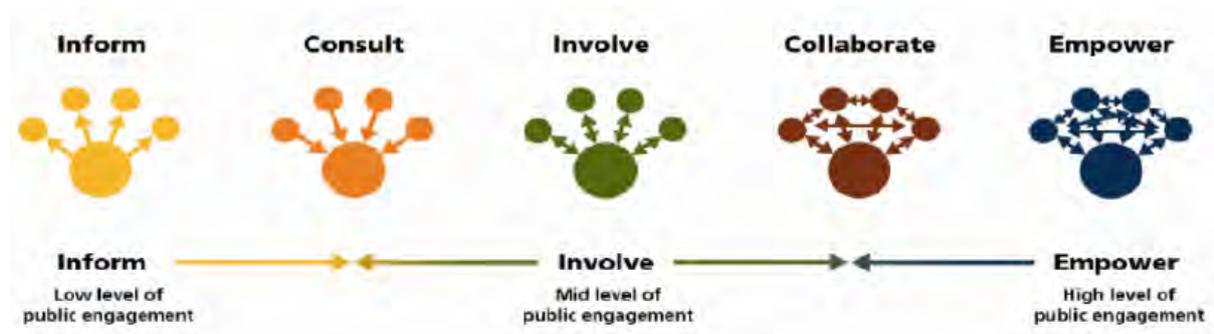
8.3 Proposed Communications and Engagement Plan

LGWM is developing a detailed *Communications and Engagement Plan* for the pre-implementation phase (which will include among other matters key communication and engagement activities / milestones, key stakeholders and engagement risks). Accordingly, this section of the report is based on the emerging direction of this plan.

Where possible, communications and engagement activity will incorporate travel behaviour change initiatives, including workplace travel interventions to mitigate disruption pre, during and post construction.

The Communications and Engagement Plan will build on the successes and lessons learnt from the engagement processes undertaken for this SSBC (and the wider LGWM programme). It will be premised on the International Association for Public Participation (IAP2) processes as set out in Figure 39 below. It will aim to consult and involve stakeholders, where appropriate and generally inform the wider public.

Figure 39: IAP2 Public Participation Spectrum



Key Engagement Phases

The engagement approach will be rolled out in three key phases as follows:

- **Involve:** early release of SSBC general arrangement plans via Social Pin-Point for public feedback (including reinforcing the Preferred Option’s “why” story). Update the LGWM communication database for the Golden Mile to ensure its contact list is up to date for directly affected stakeholders and businesses (from late 2021)
- **Consult:** consultation on general arrangement and streetscape plans to help inform the Develop Design Phase (from late 2021 or early 2022), and
- **Inform:** “close the loop” and provide updates on general arrangement and streetscape plans during the Initial and Detailed Design Phases (from mid 2022).

Principles of Engagement

The Communications and Engagement Plan (for the pre-implementation phase) will be predicated on the following engagement principles:

- Be guided by mana whenua partners (i.e. mana whenua principles will be embedded into the detailed design process). A mana whenua design working group will be established to help define the approach to the look, feel and final production of key design elements
- Be transparent, and up front, about how LGWM will work to resolve key issues raised. This will include the following activities:

- Releasing the SSBC’s general arrangement plans early via Social Pin-Point. This platform will be used to gather feedback on proposed side street lay outs, loading bay locations and accessibility parks etc. This activity will give stakeholders and interested people a chance to comment on the early plans, and will help to provide early detailed insights for the design team on what is important for the public
- Investigate in line with broader programme activity opportunities to:
 - Take shop frontage for displays
 - Regular drop in spaces and events for progress updates, and
 - Use of digital tools to bring concepts to life online and on the street.
- Meet Wellingtonians where they are. This will include:
 - Engagement activities to be based on each section of the Golden Mile. This will enable community and stakeholder feedback to be incorporated into designs on a street-by-street basis, and
 - Working with businesses to understand and map construction disruption concerns, potential mitigations and pro-active activations.
- Close the loop. This will include reporting back on the feedback received, and how the feedback has influenced the design work.

8.4 Risk Management

8.4.1 Uncertainty Log

The uncertainty log for the Preferred Option is provided below in Table 59.

Table 59: Uncertainty Log

Factors	Time	Uncertainty	Impact	Comments
Factors affecting demand				
Covid-19 impacts on growth	Ongoing	More than likely	Medium	The current project assumption is that population and employment and bus passenger numbers will return to pre-Covid-19 levels by 2036. It is acknowledged however that there is uncertainty over the medium to long term impacts of Covid-19.
CBD population growth	Long term	More than likely	Medium	The WCC Spatial Plan predicts that 18,000 more people will be living in the central city over the next 30 years. It also predicts that another 8000 residential units in the central city will be needed over the next 30 years. This population growth will increase the demand for improved public transport and active mode facilities.
CBD employment growth	Long term	More than likely	Medium	Employment in the Wellington CBD is expected to increase by 5,000 by 2036.
Pedestrians' growth	Long term	More than likely	Medium	Linked to predicted population and employment increases. Pedestrian growth will place continued pressure on pedestrian facilities.
Cyclists' growth	Long term	Reasonably foreseeable	Medium	Linked to predicted population and employment increases. Cyclist growth will place continued pressure on cycle facilities.
Fossil Fuel Free CBD	2025	Hypothetical	High	It is currently unclear what WCC's Fossil Fuel Free CBD plan will entail, but it is likely to involve significant change for the CBD's transport network.
Factors affecting supply				
Passengers transferring to MRT (once operational)	Ongoing	Reasonably foreseeable	Low	There will be some transfer of passengers from the bus to the MRT network. However, this transfer will be limited to those needing / wanting to travel north-south between the south (e.g. Newtown) and the Wellington Station. Whereas wider bus network services will continue to travel east-west along the Golden Mile.
Timing of second north-south bus spine	Ongoing	Reasonably foreseeable	High	A key project assumption is that bus volumes on the Golden Mile will be capped at 100 buses per hour per direction, and any additional bus services

				over this cap will be accommodated on a second north-south bus corridor. If this corridor does not proceed bus volumes on the Golden Mile will increase.
Changes in bus fares	Annually	Reasonably foreseeable	Low	Bus fares could rise and / or decrease in the future due to external factors (e.g. there could be an increase in bus operational costs that will require an increase in fares). Future bus customer patronage will be sensitive to bus fare changes.
Factors affecting cost				
Construction and material costs	2022 onwards	Near certain	High	Construction and material costs are increasing annually. This is due to annual inflation but compounded by material supply issues created by Covid-19.
Underground service relocations	2022 onwards	Near certain	High	Currently little is known about the depth of underground services. As such, the cost of relocating underground services is highly uncertain. If more effort is required to relocate services than is currently estimated, then implementation phase costs will increase.
Construction phasing	2022 onwards	Near certain	High	Construction phasing in the central city will be complicated, and is likely to involve night-time works that will increase implementation phase costs.

8.4.2 Key Project Risks

The Golden Mile Project Manager will be responsible for managing project risk and maintaining the Golden Mile Risk Register. Risk will be managed in accordance with Waka Kotahi's *Minimum standard Z/44 - Risk Management Guide*.

The *SSBC Risk Register* is attached as **Appendix J** (and risks identified in the Cost Estimation Report should also be referred to). The top 10 SSBC risks and opportunities identified to date are set out in Table 60. This register will be updated at the start of the pre-implementation phase.

Table 60: Top 10 SSBC Risks

Risk ID	Main risks	Mitigation strategy	Residual risk level
DP18	Lack of integration with MRT, City Streets, Thorndon Quay projects delays SSBC delivery	Engage with other project teams as early as possible to understand interdependencies and critical project milestones.	High
DP19	Preferred Option exceeds funding availability	Produce and keep updated Engineer's Estimates for the project. Ensure robust cost estimates are added into the business case process.	High
DP12	There is a threat that the Preferred Option will exceed the available budget	Produce and keep updated Engineer's Estimates for the project. Ensure robust cost estimates are added into the business case process.	Medium
DP04	There is a risk that Stakeholders reject the proposals or not come to an agreement	Maintain a correspondence or communications database to track liaison and consultation actions. Review regularly for potential gaps or conflicts.	Medium
DP35	Lack of construction resource to implement Preferred Option	Staged and well-thought out release of phases over time.	Medium
DP36	Physical works not integrated / coordinated with other transport / utility projects	Early engagement with other transport project teams and utility providers.	Medium
DP40	Threat that the Preferred Option has a negative impact on the discharge of stormwater	Obtain accurate data about existing stormwater system and develop a stormwater model to analyse effects and prepare solutions.	Medium
DP37	Lack of progress of other projects in the LGWM programme leads to compatibility issues with the Preferred Option	Consider developing interim options for connections if it becomes clear there is an issue.	Medium
DP38	Threat due to retailers and hospitality resistance to Preferred Option	Follow agreed communication and engagement plan.	Medium

Risk ID	Main risks	Mitigation strategy	Residual risk level
DP39	Threat due to lack of utility information to inform the detailed design	Engage a surveyor to capture utility information (e.g. ground penetrating radar survey) to identify any critical areas.	Medium
New	High impact of construction disruption in early stages of implementation causes strong resistance to subsequent stages	Disruption during construction is well managed and is strongly supported with travel planning and behaviour change programmes and other tailored responses to maintain the use of buses and active modes, support mode shift, maintain access and the continued vibrancy of the Golden Mile.	Medium

8.5 Benefits Management

The *Golden Mile Benefits Realisation Plan* (BRP), which is attached as **Appendix K**, sets out how the (final) benefit measures (i.e. KPIs) for the Preferred Option will be measured and the supporting monitoring measurement regime (including the responsible monitoring parties). The BRP has been developed in accordance with Waka Kotahi’s Benefits Framework⁹⁴.

LGWM have developed a Monitoring Framework (12 May 2021)⁹⁵ for monitoring and reporting on the impacts of the wider *LGWM programme*. This framework is to be primarily used to take the identified benefits and their measures at a programme level and cascade them to a project level. Accordingly, the BRP has also been developed in accordance with LGWM’s Monitoring Framework.

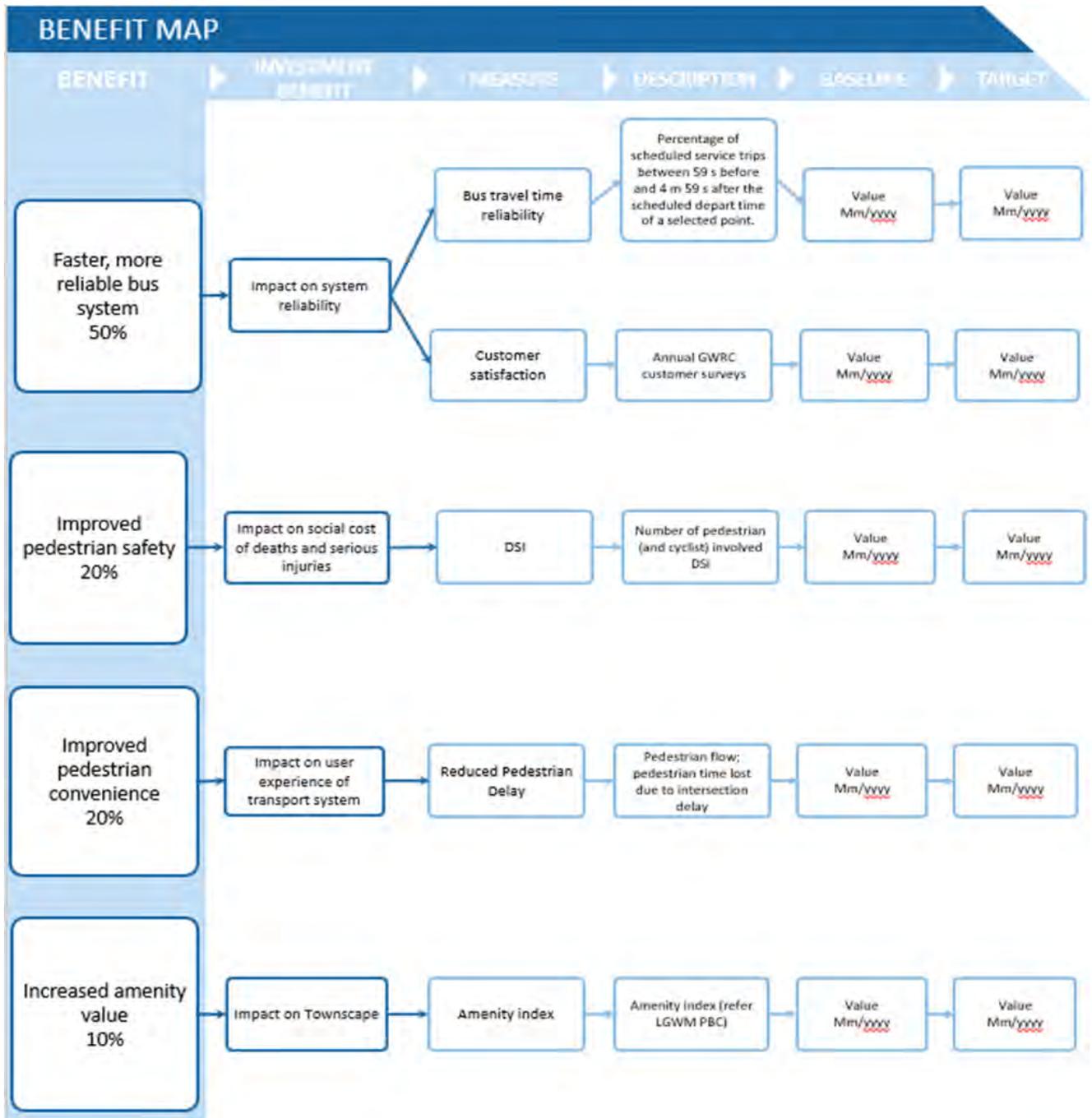
Benefits Map and Measures

Figure 40 sets out the detailed benefits map for the Golden Mile Project. The map expands upon the original benefit statements and KPIs identified in the ILM (as discussed in Section 3.9 above).

⁹⁴ See: <https://www.nzta.govt.nz/resources/land-transport-benefits-framework-and-management-approach-guidelines/?category=&subcategory=&audience=&term=land+transport+benefits+framework>

⁹⁵ LGWM Monitoring Framework DRAFT, Andy Ford, 12 May 2021

Figure 40: Golden Mile Benefit (Measures) Map



The benefits map above identifies five potential measures (i.e. column three) for measuring the four benefit statements identified in the ILM.

The individual measures are described in more detail below. The measures link the LGWM Programme Business Case's Monitoring Plan⁹⁶ and subsequent monitoring and analysis reports for the Golden Mile network and corridor components.

The reporting requirements (i.e. recording sheets), including relevant measurement owners and when the measuring should be undertaken, is set out in detail in the BRP (and have not been recorded below).

Investment Benefit Measure 1: Bus Travel Time Reliability

The LGWM Monitoring Framework provides direction regarding public transport travel times and reliability monitoring⁹⁷ and in particular recommends the following metrics for monitoring:

- **Travel times:** monthly median (and 25th / 75th percentile) travel times for core routes and sections
- **Travel time reliability:** from the median and percentile range, an estimate of variability can be derived, and
- **Aggregate:** percentage of stops at timing points that are within 5 minutes of scheduled stop times, by time period.

The section identified for the Golden Mile corridor is Courtenay Place to the Wellington Station. Currently, Bus Route 1 covers this corridor sufficiently to provide bus time reliability data using a cordon approach. For example, in the northbound direction, the measurement time could be when the bus enters the Golden Mile (at Courtenay Place / Kent Terrace) and arrives at the Wellington Station. Timing points along the way (e.g. bus stops) can be established and elapsed time measured. Similarly, the southbound direction can also be monitored using the same approach.

Bus travel times and reliability are regularly tracked by GWRC using its on-board real time tracking system.

Current variability is noted as 5 minutes for the northbound direction and 4 minutes for the southbound direction. The target value has been determined based on the bus model used in the economic model.

Investment Benefit Measure 2: Customer Satisfaction

An obvious benefit of the proposed investment will be improved levels of customer satisfaction. Survey's need to be designed and administered to gauge the current level of customer satisfaction (e.g. baseline) on the affected bus routes.

Metlink currently undertakes network wide customer satisfaction surveys on an annual basis, with these surveys capturing customer perceptions of a range of attributes, including punctuality, comfort, safety etc.⁹⁸

While these surveys are currently conducted network wide, similar, but more focused surveys could be undertaken using the same methodology but targeting bus routes on the Golden Mile. These surveys would be undertaken by independent survey intercepts on-vehicle and provide a robust, benchmarked measure of customer experience over time.

⁹⁶ See: <https://lgwm-prod-public.s3.ap-southeast-2.amazonaws.com/public/Documents/Programme-Business-Case/APPENDIX-M-MONITORING-PLAN.PDF>

⁹⁷ LGWM Modelling Scope – April 2021 – July 2021, page 6

⁹⁸ See: <https://www.metlink.org.nz/news-and-updates/surveys-and-reports/customer-satisfaction-survey/>

Nominally, surveys will be undertaken on an annual basis, in keeping with Metlinks broader annual survey and are typically conducted in May.

Customer satisfaction surveys specifically addressing the Golden Mile should focus on Bus Route 1 to provide consistency with the bus travel time reliability measures.

Investment Benefit Measure 3: Deaths and Serious Injuries

The LGWM Monitoring Framework identifies a safety metric as measured by DSIs through the Waka Kotahi Crash Analysis System (CAS). A key focus of this measure will be presenting the data spatially in GIS, with summaries provided for the Wellington CBD and the various corridors and / or areas of the city (dependent to some extent on whether a statistically significant sample of data is available).

It is anticipated that a declining DSI rate for the Golden Mile is in line with Vision Zero, and should be targeted.

The following caveats for this measurement assessment and targets are noted:

- Crash numbers are small and therefore trying to extrapolate or project a specific target number is difficult to produce with a high degree of accuracy and confidence
- Pedestrian growth is significant (expected to be upwards of 20 per cent. DSI figures should incorporate increased pedestrian growth and therefore higher exposure)
- Future DSI targets should include likely improvements on the Golden Mile including infrastructural and operational (e.g. increased buses) improvements, and
- Baseline pedestrian DSI is an average DSI per annum based on 2015-2019 (5-year) crash history from CAS.

Investment Benefit Measure 4: Pedestrian Delay

The Waka Kotahi non-monetised benefits manual and benefits framework describes how pedestrian delay should be scoped. The measure is described by this framework as “pedestrian time lost due to intersection delay”⁹⁹.

The LGWM Programme Business Case Monitoring Plan identifies a number of key intersections that are to be monitored as part of the RPI. Four of those intersections identified are on the Golden Mile, and are therefore recommended to be used for monitoring and reporting pedestrian delays. The intersections are:

- Bowen Street / Lambton Quay
- Taranaki Street / Courtenay Place
- Lambton Quay / Willis Street, and
- Willis Street / Boulcott Street.

Investment Benefit Measure 5: Amenity Index

The Amenity Index is defined in the LGWM Programme Business Case Monitoring Framework. An amenity index for Wellington has been defined specifically for LGWM and is intended to demonstrate liveability within the central city. The amenity index method or data score, scores the index on a five point scale and is calculated using eight factors: traffic volumes, traffic speed, footpath area, vehicle traffic area, footpath and road material, density of street furniture and green space coverage. The metric is a constant, and is therefore not time specific.

⁹⁹ Waka Kotahi non monetised benefits manual, page 88, section 10.1.2, August 2020

The sections of the Golden Mile that have been specifically identified in the Amenity Index for monitoring have been included in the BRP.

8.6 SSBC Assurance Arrangements

In addition to the LGWM Technical Advisory Group review process, an independent peer review of the SSBC report and economics / transport modelling process as well as a road safety audit was undertaken by LGWM. In addition, a separate parallel cost estimate was prepared by WT Infrastructure.

All of the peer reviews are provided in **Appendix L**. As noted in Section 6.2, the WT Infrastructure’s parallel cost estimate is appended to the Cost Estimate Report (see Appendix G).

The purpose of each peer review is summarised in Table 61 below. In summary, all peer review issues were resolved to the satisfaction of LGWM. The issues or opportunities related to subsequent pre-implementation and construction phases have been noted and will be addressed in the relevant phase by LGWM.

Table 61: Summary Descriptions of SSBC Assurance Processes

Item	Purpose
SSBC Peer Review	Review of the entire SSBC in accordance with Waka Kotahi’s peer review guidelines and to provide quality assurance of the business case structure, process and outcomes
Economics / Transport Modelling Peer Review	To provide an independent peer review of the economic analysis (and the derivation of benefits) and the transport modelling and analytics undertaken
Road Safety Audit	To provide an independent review of the Preferred Option in order to identify any safety concerns that may affect safety performance
Parallel Cost Estimate	To provide a parallel Detailed Business Case Estimate for the Preferred Option (see Appendix G)

9 Next Steps

The next steps for this SSBC are as follows:

- To seek **approval** for the SSBC from the LGWM Board in October 2021, and
- To seek **funding approval** for implementing the pre-implementation phase of the SSBC from the Waka Kotahi Board in November 2021.

Once this SSBC is approved, the next priority steps for LGWM are as follows:

- LGWM to confirm procurement of the professional service supplier for the pre-implementation phase (which is likely to be FutureGroup, however final decisions will be based on LGWM being satisfied with pricing and key personnel)
- Commence the Develop Design Phase (i.e. the first phase of the pre-implementation phase), including undertaking the following priority actions:
 - Golden Mile Design Team to mobilise, undertake gap analysis and commence detail design planning
 - LGWM Partners to finalise accessibility, urban design, landscape and placemaking approaches
 - LGWM to commence underground service location investigations to increase the understanding of service depths / locations (e.g. ground penetrating radar investigations)
 - Commence archaeology and HAIL investigations
 - Implement the activities identified in the (pre-implementation) communications and engagement plan, including posting the SSBC general arrangement plans on a social pin point platform, and preparing for engagement on the Develop Design Plans for late 2021
 - Undertake bus service disruption engagement / planning with Metlink
 - Establish engagement processes with mana whenua and the Pōneke Promise, and
 - Undertake early engagement with WCC traffic control officers on the requirements for the proposed traffic resolution reports.
- Commence procurement processes to identify potential ECI contractors in late 2021, with the objective of having them in place to inform the Initial Design Phase from March 2022.



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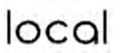
Appendix A - Golden Mile Strategic Case (2020)

October 2020

Golden Mile Single Stage Business Case | Contract No. 1851



Futuregroup »





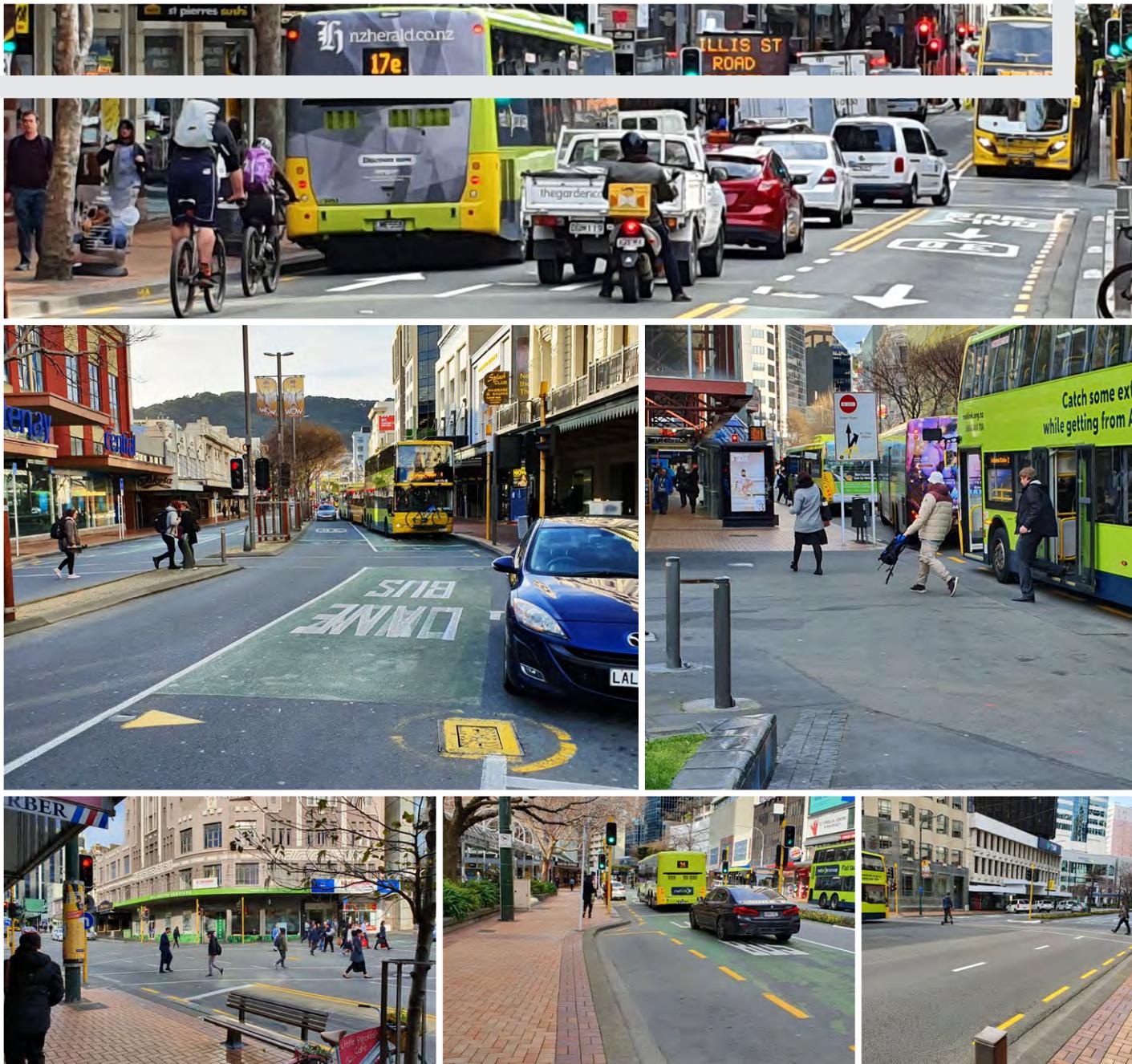
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Appendix B - Golden Mile Vision Statement (2036)

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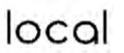
Appendix C Golden Mile Multi Criteria Analysis (MCA) Report

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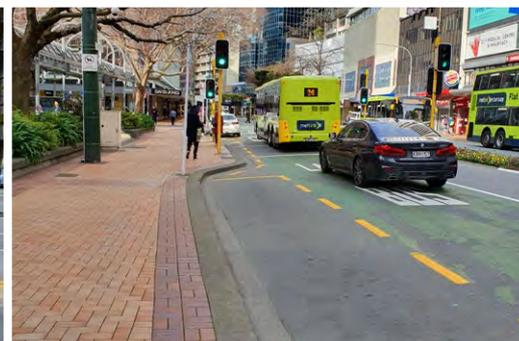
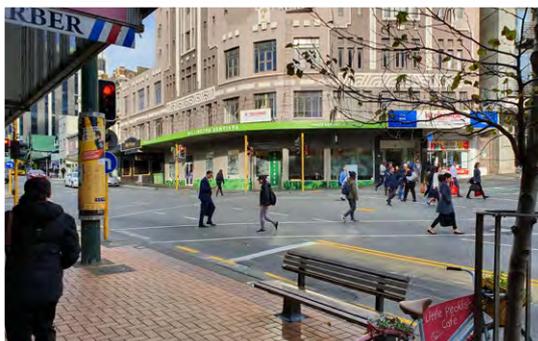
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Appendix D - Design Philosophy Statement

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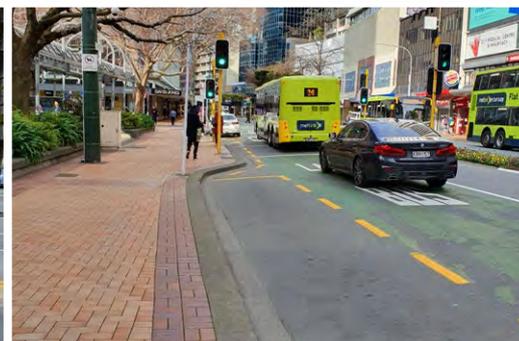
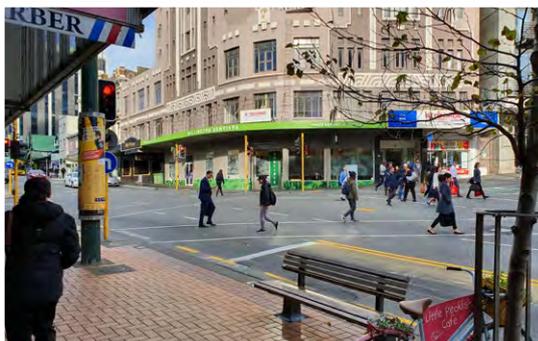
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Appendix E - Golden Mile Economics Assessment Report

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Appendix F - Golden Mile Traffic Assessment Report October 2021

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Appendix G - Golden Mile Cost Estimation Report

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Appendix H - Golden Mile Consenting Strategy

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Appendix I - Golden Mile Traffic Regulations Strategy

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Appendix J - Golden Mile SSBC Risk Register

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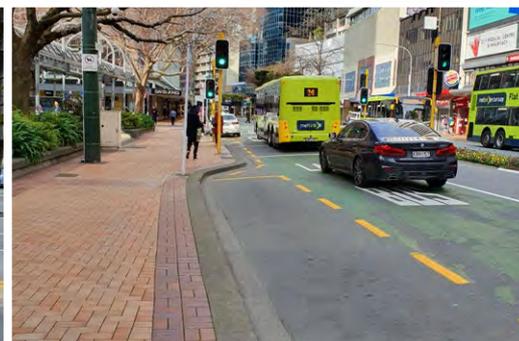
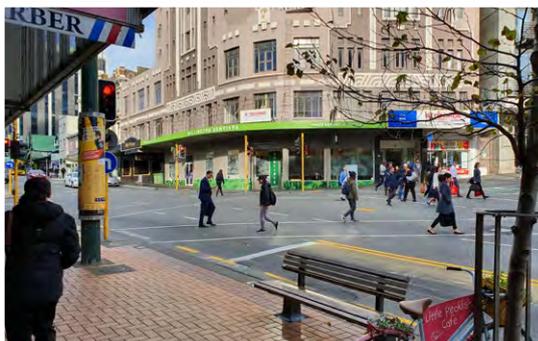
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Appendix K - Golden Mile Benefits Realisation Plan

October 2021

Golden Mile Single Stage Business Case | Contract No. 1851



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Appendix L - Golden Mile Peer Reviews

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